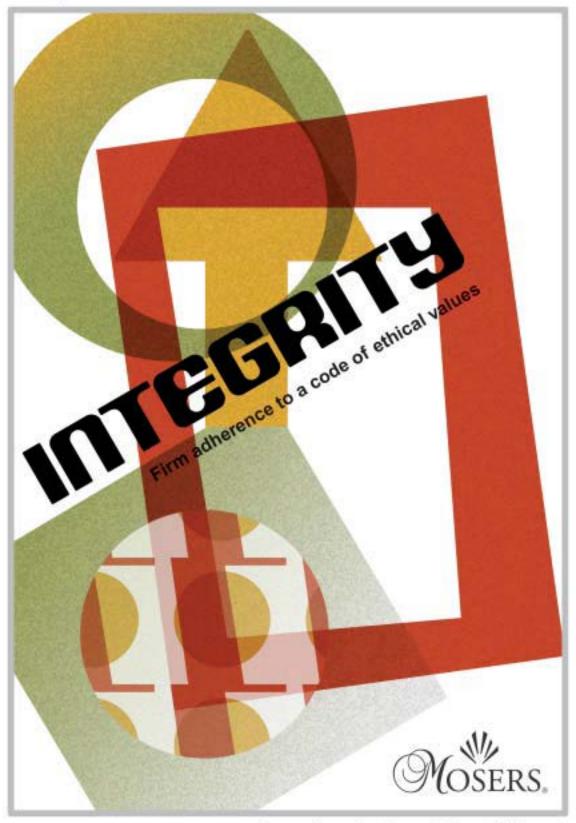
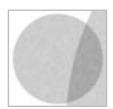
# Missouri State Employees' Retirement System

A Component Unit of the State of Missouri



Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2002

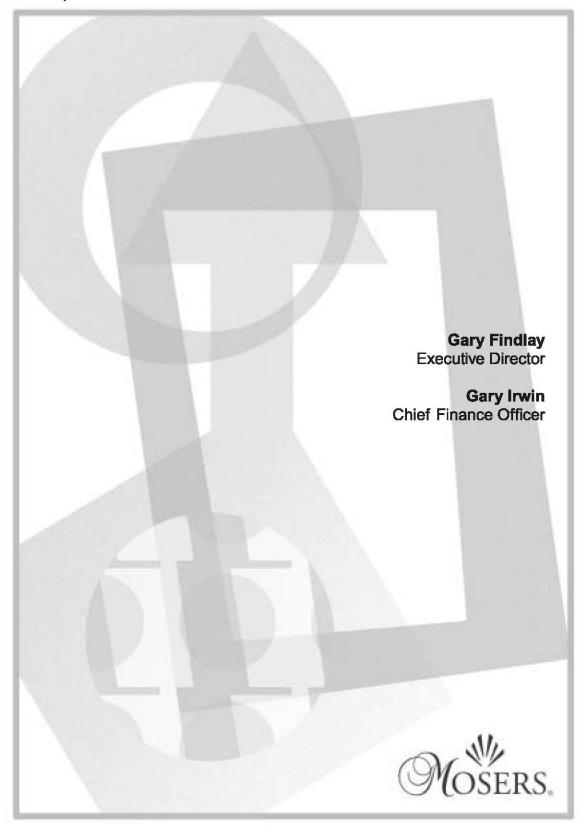


"Integrity, balance, security, trust, strength, and stability – these are the core values that shape MOSERS' guiding principles. These principles characterize the highest ethical standards and promote a work culture that enables us to act in the exclusive interest of the members of our system."

Gary Findlay
Executive Director

# Missouri State Employees' Retirement System

A Component Unit of the State of Missouri



Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2002



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# **Certificate of Achievement**



### Letter of Transmittal



September 26, 2002

The Board of Trustees Missouri State Employees' Retirement System 907 Wildwood Drive Jefferson City, MO 65109

#### Dear Board Members:

It is again with great pleasure that I submit this year's annual report of the Missouri State Employees' Retirement System (MOSERS).

### Fiscal Year 2002 Highlights

Last fiscal year, MOSERS staff began work on the implementation of legislation that provided for a Deferred Retirement Option Provision (BackDROP) for general state employees, which became effective January 1, 2002. As of June 30, 2002, 308 members elected to retire utilizing the BackDROP feature and received \$19,162,726 in BackDROP payments. Included in these totals were 198 members who chose to directly rollover \$12,739,639 of their payments into another qualified plan or IRA and eleven members who opted to receive their BackDROP payment in three annual installments with \$291,981 being paid in the current fiscal year and \$583,963 to be paid in the future. Additional information regarding the BackDROP option is included in this annual report and on our web site.

New federal legislation also went into effect January 1, 2002, that enabled members to directly rollover funds from their deferred compensation plan to purchase service credit in MOSERS. This resulted in a significant

increase in service purchases processed by MOSERS staff. For the six months ending June 30, 2002, MOSERS received \$3,243,763 for the purchase of service credit, and of that total, \$2,459,427 came from direct rollovers. For the same time period ending June 30, 2001, MOSERS only received \$901,369 for the purchase of service credit.

With the passage of Senate Bill 371 last year, a mandatory defined contribution plan for new "education employees" hired at the regional colleges and universities became effective July 1, 2002. Staff worked in conjunction with our external asset consultant, Summit Strategies, to conduct a formal search and hire a third-party administrator for the new plan. After a thorough search and complete review of investment offerings, educational programs, administrative capabilities, and costs, the Teachers Insurance & Annuity Association – College Retirement Equities Fund (TIAA-CREF) was selected from a competitive pool of candidates as the third-party administrator. Staff worked with TIAA-CREF and the regional colleges and universities throughout Missouri to implement this new plan and will continue to make refinements to the administration of the plan.

#### Report Contents and Structure

MOSERS is considered a component unit of the state of Missouri for financial reporting purposes and, as such, the financial statements contained in this report are also included in the State of Missouri Comprehensive Annual Financial Report. The financial information presented in this report is the responsibility of the management of MOSERS, and sufficient internal accounting controls exist to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements, supporting schedules, and statistical tables. The report is also designed to comply with the reporting requirements of Sections 104.480, 104.1006, and 105.661 of the Revised Statutes of Missouri (RSMo) as amended. The report is divided into the following five sections:

- the Introductory Section, which contains general information regarding the operations of MOSERS.
- the Financial Section, which contains the financial statements, schedules, and supplementary financial information regarding the funds administered by MOSERS.
- the **Investment Section**, which contains information pertaining to the management of the investments of the Pension Trust Funds.
- the **Actuarial Section**, which contains information regarding the financial condition and financial position of the retirement plans administered by the system.
- the Statistical Section, which contains general statistical information regarding system participants and finances.

#### Summary of Financial Information

The following schedule is a summary of the Pension Trust Funds' additions and deductions for the years ended June 30, 2002, and June 30, 2001.

	<u>June 30, 2002</u>	<u>June 30, 2001</u>
Additions	\$ (113,571,787)	\$ 128,977,714
Deductions	(291,085,249)	(239,464,885)
Net Change	\$ (404,657,036)	\$ (110,487,171)

Additions decreased by \$242,549,501 primarily due to a decrease in net investment income of \$237,832,244. Deductions increased by \$51,620,364 primarily due to an increase of \$51,611,866 in benefit payouts for the year.

The following schedule is a summary of the revenues and expenses of the Internal Service Fund (insurance activity) for the years ended June 30, 2002, and June 30, 2001.

	<u>Ju</u>	<u>ne 30, 2002</u>	Ju	<u>ine 30, 2001</u>
Operating revenues	\$	25,190,197	\$	23,649,880
Operating expenses		(25,192,940)		(23,596,435)
Nonoperating revenu	es	47,767		81,717
Net Change	\$	45,024	\$	135,162

Operating revenues increased by \$1,540,317 primarily as a result of an increase in basic life premiums due to the increase in coverage, effective January 1, 2001. The basic life coverage afforded active employees increased from \$15,000 per employee to one times annual salary subject to a floor of \$15,000 of coverage. Likewise, operating expenses increased by \$1,596,505 primarily as a result of transmitting increased premiums to the insurance company, offset by a reduction of \$626,637 in the amount of premium refunds issued. In the fiscal year ended June 30, 2001, there was an unusually high volume of refunds issued as a result of the conversion from premiums paid in advance to premiums paid in arrears and the state of Missouri's conversion to a lag payroll system. The decrease in nonoperating revenues resulted primarily from a continuing decline in interest rates during the fiscal year.

#### Plan Financial Condition

The funding objective of MOSERS' Pension Trust Funds is to meet long-term benefit promises through contributions, which remain approximately level as a percent of member payroll over decades of time. Historical information relating to progress in meeting this objective is presented on pages 36-41. During the year ended June 30, 2002, the funded ratio of the Missouri State Employees' Plan, which covers 92,375 participants, decreased from 97% to 95.9%, primarily as the result of plan investment experience. The funded ratio of the Administrative Law Judges and Legal Advisors' Plan, which covers 102 participants, decreased from 85.7% to 83.5%, primarily as the result of plan investment experience. Funding of the Judicial Plan, which covers 838 participants, began on July 1, 1998. During the year ended June 30, 2002, the funded ratio of the Judicial Plan increased from 9.1% to 11.6%, primarily as the result of favorable experience in the aggregate. Additional information regarding the financial condition of the Pension Trust Funds can be found in the Actuarial Section of this report.

#### **Investment Activity**

MOSERS' investment portfolio produced a total return, net of expenses, of -6.2% for the year ended June 30, 2002. Even though the return was negative again this year, we are pleased that the MOSERS' investment policies in place have worked as intended. The policy benchmark return for the year was off by -8.8%, which indicates MOSERS' practices resulted in a +2.6% value added versus the markets for the year. The fund has achieved its goal of adding value over its policy benchmark and, for the longer term, has continued to exceed the actuarial target rate of a 5% real return. Additional information regarding the investment results for the year is included in the Investment Section of this report.

### Legislation Enacted During the 2002 Legislative Session

On July 11, 2002, Governor Bob Holden signed into law HB 1455 – legislation that involved minor modifications to and clarifications of the Missouri State Employees' Plan, the Administrative Law Judges and Legal Advisors' Plan, and the Judicial Plan. These changes were designed to enable MOSERS to more effectively administer these plans as well as ease some of the administrative burden associated with members and their beneficiaries applying for and receiving benefits. There were no benefit increases enacted in the fiscal year ended June 30, 2002.

### Certificate of Achievement for Excellence in Financial Reporting

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MOSERS for its Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2001. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of state and local government financial reports. In order to be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized CAFR conforming to program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. MOSERS has received a Certificate of Achievement for the last thirteen consecutive years (fiscal years ended 1989-2001). We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to GFOA for evaluation.

#### Conclusion

This report is a product of the combined efforts of the MOSERS' staff and advisors functioning under your leadership. It is intended to provide complete and reliable information, that will facilitate the management decision process; serve as a means for determining compliance with legal requirements; and allow for the evaluation of responsible stewardship of the funds of the system. As in the past, MOSERS received an unqualified opinion from our independent auditors on the financial statements included in this report. The opinion of the independent auditor can be found on page 18.

Copies of this report are provided to the Governor, State Auditor, Joint Committee on Public Employee Retirement of the General Assembly, and all state agencies. These agencies form the link between MOSERS and its members, and their cooperation contributes significantly to the success of MOSERS. We hope all recipients of this report find it informative and useful.

I would like to take this opportunity to express my gratitude to you, the staff, the advisors, and other people who have worked so diligently to assure the continued successful operation of the system.

Respectfully submitted,

**Executive Director** 

### Letter From The Chairman



September 26, 2002

#### Dear Members:

On behalf of the board of trustees, I am pleased to present the MOSERS' Comprehensive Annual Financial Report for the fiscal year ended June 30, 2002. This report provides information on the financial status of your retirement system while also highlighting significant changes that occurred during the year.

Your retirement system remains well funded and your promised benefits are secure despite the difficult investment environment and sluggish economy. Although the fund generated a loss of -6.2% net of expenses this fiscal year, it outperformed the policy benchmark by 2.6% – a small but welcomed feat in a very volatile investment market. The board policy of preserving system assets and maximizing the long-term growth of those assets through diversification will continue to be our primary focus as we move into the next fiscal year.

The board experienced some turnover this past year due to the retirements of Senator John Scott, and Steve Price, Director of House Appropriations. Mike Hartmann also resigned from the board after leaving his position as Commissioner of Administration to become

the Governor's Chief of Staff. On behalf of the board, staff and membership, I would like to express our collective thanks to these dedicated and experienced individuals for their many contributions to the system and for serving our membership so well. The board also welcomed Senator Ed Quick and Lori Strong-Goeke this year, and we look forward to serving and working with them.

In closing, I would like to thank the staff at MOSERS for continuing to maintain a high level of commitment and service to our plan participants. If you have any questions regarding this report, please contact us at MOSERS, PO Box 209, Jefferson City, MO 65102 or by calling 1-800-827-1063.

Sincerely,

Representative Bill Skaggs, Chairman

Bill Stryge

Board of Trustees

### **Board of Trustees**





Seated left to right

Senator Ed Quick Member of the Senate

Representative Bill Skaggs Board Chairman Member of the House of Representatives

> Bryan Ornburn Elected Retired Member

> > Tom Hodges

Field Services Coordinator Board of Probation and Parole Department of Corrections Elected Active Member

Jacquelyn White Commissioner Office of Administration Ex-Officio Member

Standing left to right

Lori Strong-Goeke Assistant Director Office of Administration Division of Budget and Planning Governor Appointed Member

Representative Richard Franklin Member of the House of Representatives

> Carol Gilstrap Vice Chairman

Vice President and Team Leader US Bank - Government Banking Division Governor Appointed Member

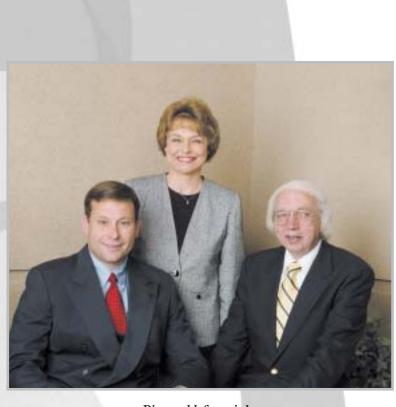
> Nancy Farmer State Treasurer Ex-Officio Member

> > Not Pictured

Senator John Russell Member of the Senate

Vacant Elected Active Member

# **Administrative Organization**



Pictured left to right

### Rick Dahl

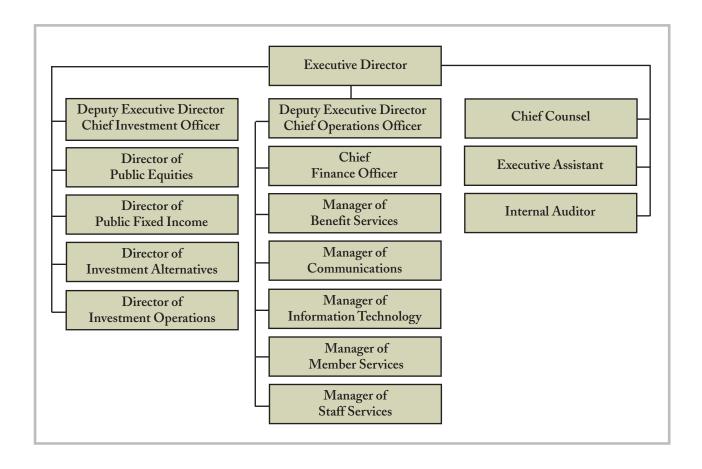
Deputy Executive Director Chief Investment Officer

# Karen Stohlgren

Deputy Executive Director Chief Operations Officer

> Gary Findlay **Executive Director**

# **Administrative Organization**



#### INTRODUCTORY SECTION



#### About MOSERS

MOSERS was established September 1, 1957, and is governed by laws of the state of Missouri.

### Purpose

MOSERS provides retirement, survivor and disability benefits, and life insurance to its members.

MOSERS administers retirement benefits for most state employees, including members of the Missouri General Assembly, elected state officials, administrative law judges and legal advisors, and judges. MOSERS is responsible for administering the law in accordance with the expressed intent of the Missouri General Assembly and bears a fiduciary obligation to the state employees who are its members and beneficiaries.

#### MOSERS Mission

To play an integral role in the future financial security of plan participants by promptly and courteously delivering quality benefits and information which members value and trust through professional plan administration and prudent management of system assets.

#### Administration

State law provides that responsibility for the administration of MOSERS is vested in an eleven member board of trustees. The board is comprised of:

- Two members of the Senate appointed by the President Pro Tem of the Senate.
- Two members of the House of Representatives appointed by the Speaker of the House.
- Two members appointed by the Governor.
- The State Treasurer.
- The Commissioner of Administration.
- Three other members of the system: two active members elected by the active and terminated-vested members, and one retiree elected by the retired members.

The day-to-day management of MOSERS is delegated to the executive director who is appointed by the board and serves at its pleasure. The executive director acts as advisor to the board on all matters pertaining to the system and, contracts for professional services and employs the remaining staff needed to operate the system.

### Organization

The executive director, deputy executive director - chief operations officer, and the deputy executive director - chief investment officer are responsible for planning, organizing, and administering the operations of the system under the broad policy guidance and direction of the board.

MOSERS' office is divided into eight administrative sections that perform specific functions for the system.

#### **Executive Services**

The executive services team provides administrative support by assisting the executive director and chief operations officer in the major legal, operational, and oversight functions of the retirement, benefit, and communication programs.

#### Accounting

This section is responsible for all financial records of the programs administered by MOSERS, including the preparation of financial and statistical reports. Accounting performs the purchasing functions for MOSERS and interfaces with the investment custodian, investment managers, Office of Administration accounting, various payroll/personnel departments, life insurance companies, actuaries, banks, and the IRS.

#### About MOSERS



#### **Benefit Services**

Benefit services is responsible for all contact with the membership regarding the benefit programs administered by MOSERS, which include retirement, life insurance, and longterm disability.

#### Communications

Communications is responsible for providing clearly written and attractively designed publications and educational seminars needed to inform all members about benefit programs administered by MOSERS. Communications and the information technology section are jointly responsible for MOSERS' web site.

#### Information Technology

Utilizing an IBM AS400 minicomputer and high-end work stations, information technology provides all computer and technical design support for MOSERS' data processing activities. This group is responsible for establishing and updating computer programs to implement plan changes and also maintains members' folder information on FileNet - an optical disk image system that allows information to be stored and processed using computer displayed images of original documents. Information technology is also responsible for administration of the personal computer network and the telephone system. Information technology and the communications section are jointly responsible for MOSERS' web site.

#### Investments

The primary functions of the investment staff are to provide internal investment management and consulting services to the board and the executive director. Other functions include hiring and terminating external investment managers, analyzing and rebalancing the overall asset allocation and portfolio, serving as a liaison to the investment community, and informing and advising the board and executive director on financial, economic, and political developments which may affect the system. The investments staff also works with the asset consultant and the executive director in selecting and monitoring external money managers. Information regarding the investment professionals who provide services to MOSERS can be found on pages 59-71 of the Investment Section.

#### Member Services

Member services is responsible for establishing and maintaining all membership records including maintenance of the data on the electronic imaging system, balancing payroll deductions for insurance, and entering the payroll, service, and leave data into the system's computerized database.

#### **Staff Services**

Staff services provides clerical support, mail services, and general building maintenance for MOSERS' personnel. Human resources is also represented in this section.



### **Outside Professional Services**

### Actuary Gabriel, Roeder, Smith & Co. Actuaries and Consultants Norman L. Jones, Brad Armstrong Southfield, Michigan

### Auditors KPMG LLP

Certified Public Accountants Andrew J. Blossom, Melissa Benton Kansas City, Missouri

### Legal Counsel Thompson Coburn Attorneys at Law Allen Allred, Tom Litz St. Louis, Missouri

### Master Custodian Mellon Trust John Vanderpool, Irene Speridakos Boston, Massachusetts

### Investment Management Consultant Summit Strategies, Inc. Steve Holmes, Tom Pollihan St. Louis, Missouri

### **Equity Investment Advisors** Advanced Investment Management, Inc. William Belko, Tom Allen Pittsburgh, Pennsylvania

AmeriCap Advisers, LLC Michael Gayed, Steve Shobin New York, New York

Capital Guardian Trust Mike Nyeholt, Andy Barth Los Angeles, California

Dimensional Fund Advisors, Inc. Rex Sinquefield, Carol Wardlaw Santa Monica, California

Legg Mason Capital Management, Inc. James P. Daly, Jr., Kyle Prechtl Legg Baltimore, Maryland

### Mastholm Asset Management, LLC Thomas Garr, Theodore Tyson Bellevue, Washington

Merrill Lynch Asset Management Group Rick Vella, Lisa Torrington New York, New York

Oak Associates, Ltd. Sandra Noll, Jim Oelschlager Akron, Ohio

> OakBrook Investments Michael J. Lorenzen, Janna L. Sampson Lisle, Illinois

Silchester International Investors Christopher B. Cowie, Stephen C. Butt London, England

### **Diversification Pool Investment Advisors** BlackRock Financial Management Rob Capaldi, Andy Phillips, Dennis Schaney New York, New York

Hoisington Investment Management Co. Van Hoisington, Lacy Hunt Austin, Texas

NISA Investment Advisors, LLC Robert Krebs, Bill Marshall St. Louis, Missouri

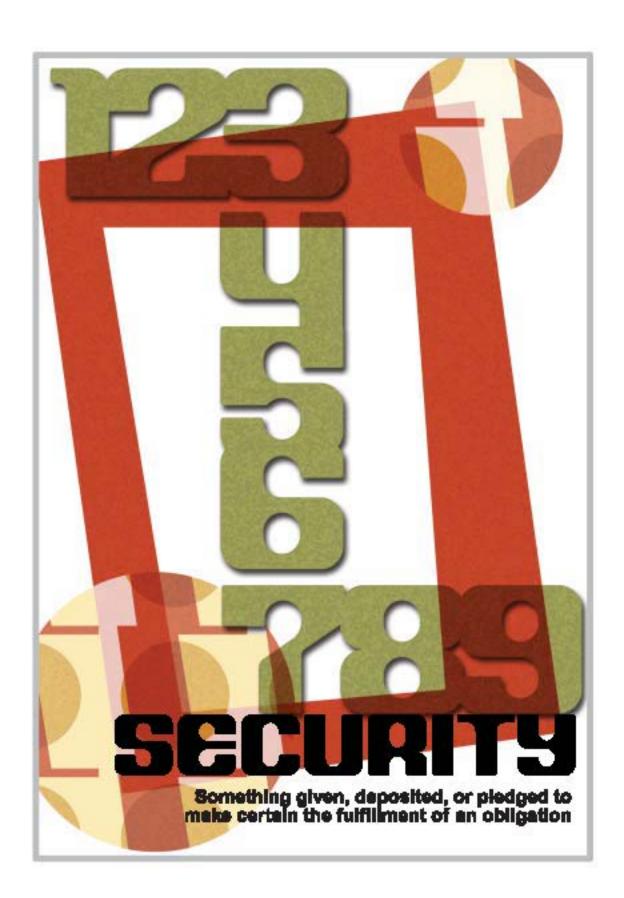
Risk Management Consultant Charlesworth & Associates, LLC Art Charlesworth, Bob Charlesworth Overland Park, Kansas

### Securities Lending Advisors Credit Suisse First Boston Corporation Dwight Skerrit New York, New York

Lehman Brothers Ann Erni New York, New York

Third-Party Administrators The Standard Insurance Tom Trussell Overland Park, Kansas

TLAA-CREF Paul Kissel, Lisa Dunkel Chicago, Illinois



# Management's Responsibility for Financial Reporting



September 26, 2002

Management has prepared the basic financial statements of the Missouri State Employees' Retirement System (MOSERS), and is responsible for the integrity and fairness of the information presented. Some amounts included in the financial statements may be based on estimates and judgments. These estimates and judgments were made utilizing the best business practices available. The accounting policies followed in the preparation of these basic financial statements conform with generally accepted accounting principles. Financial information presented throughout the annual report is consistent with the basic financial statements.

Ultimate responsibility for the basic financial statements and annual report rests with the board of trustees. The executive director and the rest of MOSERS staff assist the board in its responsibilities. Systems of internal control and supporting procedures are maintained to provide assurance that transactions are authorized, assets safeguarded, and proper records maintained. These controls include standards in hiring and training of employees, the establishment of an organizational structure, and the communications of policies and guidelines throughout the organization. These internal controls are reviewed by internal audit programs. All internal audit reports are submitted to the board of trustees.

The system's external auditors, KPMG LLP, have conducted an independent audit of the basic financial statements in accordance with generally accepted auditing standards. This audit is described in their Independent Audit Report on page 18. Management has provided the external auditors with full and unrestricted access to MOSERS staff to discuss their audit and related findings as to the integrity of the plan's financial reporting and the adequacy of internal controls for the preparation of financial statements.

Gary Findlay

Executive Director

Gary Irwin

Chief Finance Officer

# Independent Auditors' Report



August 16, 2002

The Board of Trustees Missouri State Employees' Retirement System 907 Wildwood Drive Jefferson City, MO 65109

#### Dear Board Members:

We have audited the accompanying basic financial statements of the Missouri State Employees' Retirement System, a component unit of the state of Missouri, as of and for the year ended June 30, 2002, as listed in the accompanying table of contents. These financial statements are the responsibility of the retirement system's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements of the Missouri State Employees' Retirement System's pension trust funds present fairly, in all material respects, the plan net assets as of June 30, 2002, and the related changes in plan net assets for the year then ended in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the financial statements of the Missouri State Employees' Retirement System's Internal Service Fund present fairly, in all material respects, its financial position as of June 30, 2002, and the changes in its financial position and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplementary management discussion and analysis on pages 19-21 and the supplementary schedules of funding progress and employer contributions on pages 36-41 are not a required part of the basic financial statements of the Missouri State Employees' Retirement System, but are supplementary information required by the accounting principles generally accepted in the United States of America. The supplementary information included on pages 42-48 is presented for purposes of additional analysis and is not a required part of the basic financial statements of the Missouri State Employees' Retirement System. Such information, included on pages 19-21 and 36-48 has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.







### Required Supplementary Information Management Discussion and Analysis

The basic financial statements contained in this section of the Comprehensive Annual Financial Report consist of:

The *Statements of Plan Net Assets*, which reports the pension trust funds assets, liabilities, and resultant net assets where Assets – Liabilities = Net Assets available at the end of the fiscal year. It can be thought of as a snapshot of the financial position of the pension trust funds of MOSERS at that specific point in time.

The Statements of Changes in Plan Net Assets, which reports the pension fund transactions that occurred during the fiscal year where Additions – Deductions = Net Change in Net Assets. It can be thought of as a movie that has recorded the action that occurred over the specified time period of a fiscal year, and supports the change that has occurred to the prior year's net asset value on the Statements of Plan Net Assets.

The Balance Sheet of the Internal Service Fund is similar to the Statement of Net Assets in that it also is a snapshot of the financial position of the Internal Service Fund where Assets = Liabilities + Net Assets.

The Statement of Revenues, Expenses, and Changes in Net Assets of the Internal Service Fund is similar to the Statements of Changes in Plan Net Assets in that it also reports the activity that occurred over the period of the fiscal year where Revenues – Expenses = Net Income and supports the change to the prior year's net assets. The Statement of Cash Flows of the Internal Service Fund reports the transactions for the fiscal year of the Internal Service Fund on a cash basis. It is similar to the Statement of Revenues, Expenses, and Changes in Net Assets, however, the focus of this statement is on the change to cash balances with accrued income and expense items eliminated.

The Notes to the Financial Statements are an integral part of the above financial statements and include additional information not readily evident in the statements themselves.

This Required Supplementary Information and the Required Supplementary Information and Schedules following the Notes to the Financial Statements, provide added historical and detailed information considered useful in evaluating the condition of the plans administered by MOSERS.

The following pages 20-21 contain summary comparative statements of MOSERS' pension trust funds and Internal Service Fund.



### **Pension Trust Funds Summary Comparative Statements of Plan Net Assets**

	As of June 30, 2002	As of June 30, 2001	Percentage Change
Cash and short-term investments	\$ 378,842,984	\$ 84,964,687	345.88%
Receivables	103,682,194	105,896,105	(2.09)
Investments	4,881,498,067	5,370,228,746	(9.10)
Invested securities lending collateral	1,008,874,150	1,177,002,348	(14.28)
Fixed assets	3,901,893	4,004,611	(2.56)
Other assets	58,594	59,898	(2.18)
Total assets	6,376,857,882	6,742,156,395	(5.42)
Administrative expense payables	3,065,142	2,729,761	12.29
Investment purchase payables	301,053,151	95,205,011	216.22
Securities lending collateral	1,010,179,520	1,177,016,421	(14.17)
Other liabilities	277,423	265,520	4.48
Total liabilities	1,314,575,236	1,275,216,713	3.09
Net assets	\$ 5,062,282,646	\$ 5,466,939,682	(7.40)%

#### Summary Comparative Statements of Changes in Plan Net Assets

	Year Ended June 30, 2002	Year Ended June 30, 2001	Percentage Change
Contributions Investment net loss - investing activities Investment net income - securities lending activities Miscellaneous income Total additions Benefits Service transfers and refunds Administrative expenses Total deductions Net decrease Net assets beginning of year	\$ 236,638,339 (351,502,117) 841,245 450,746 (113,571,787) 285,261,239 27,970 5,796,040 291,085,249 (404,657,036) 5,466,939,682	\$ 241,385,199 (122,732,036) 9,903,408 421,143 128,977,714 233,649,373 31,482 5,784,030 239,464,885 (110,487,171) 5,577,426,853	(1.97)% 186.40 (91.51) 7.03 (188.06) 22.09 (11.16) 0.21 21.56 266.25 (1.98)
Net assets end of year	\$ 5,062,282,646	\$ 5,466,939,682	(7.40)%

The increase in cash and short-term investments was primarily a result of preparing for a new allocation model being implemented at the end of June 2002. Investments decreased due to a continuation of the general market downturn and the buildup of cash and short-term investments noted above. Payables for investment purchases increased primarily due to the end of June 2002 implementation of the new investment allocation.

The decrease in contributions was primarily attributable to a freeze on statewide salaries and employee attrition. The increase in the investment losses was attributable to the continuation of the general market decline noted in the prior year. Benefit payments increased as a result of a net increase in benefit recipients and the implementation of the BackDROP benefit payment feature on January 1, 2002.

During the fiscal year ended June 30, 2002, an error was discovered in the amount recorded as securities lending rebates for the fiscal year ended June 30, 2001. Rebates in the amount of \$4,068,350 were not recorded until fiscal year 2002 as a result of the transition of investment custodians at the end of fiscal year 2001. Although this error was not deemed to be material to the financial statements as a whole, when comparing the total net income from securities lending activities for fiscal years 2001 and 2002, those amounts would have been reported as \$5,835,058 and \$4,909,595, respectively.



### Internal Service Fund Summary Comparative Balance Sheets

	As of June 30, 2002	As of June 30, 2001	Percentage Change
Premiums receivable	\$ 1,187,571	\$ 2,023,864	(41.32)%
Investments	1,606,156	722,700	122.24
Total assets	2,793,727	2,746,564	1.72
Premiums payable	2,343,733	2,258,796	3.76
Other liabilities	165,601	248,399	(33.33)
Total liabilities	2,509,334	2,507,195	0.09
Net Assets	284,393	239,369	18.81
Total liabilities and net assets	\$ 2,793,727	\$ 2,746,564	1.72%

#### Summary Comparative Statements of Revenues, Expenses, and Changes in Net Assets

	Year Ended June 30, 2002	Year Ended June 30, 2001	Percentage Change
Premium receipts	\$ 24,753,708	\$ 23,185,529	6.76%
Miscellaneous income	436,489	464,351	(6.00)
Total operating revenue	25,190,197	23,649,880	6.51
Premium disbursements	24,675,520	22,480,704	9.76
Premium refunds	78,188	704,825	(88.91)
Administrative expenses	439,232	410,906	6.89
Total operating expenses	25,192,940	23,596,435	6.77
Net operating income (loss)	(2,743)	53,445	(105.13)
Investment income	47,767	81,717	(41.55)
Net revenues over expenses	45,024	135,162	(66.69)
Net Assets beginning of year	239,369	104,207	129.71
Net Assets end of year	\$ 284,393	\$ 239,369	18.81%

#### **Summary Comparative Statements of Cash Flows**

	Year Ended June 30, 2002	Year Ended June 30, 2001	Percentage Change
Cash flows from operating activities Cash flows from noncapital financing activities Cash flows from investing activities	\$ 840,291 (4,602) (835,689)	\$ (418) 7,863 (7,445)	(201,126.56)% (158.53) 11,124.84
Net change in cash	0	0	0.0
Cash balances beginning of year	0	0	0.0
Cash balances end of year	\$ 0	\$ 0	0.0 %

The decrease in premiums receivable was attributable to the state of Missouri's conversion from monthly to semi-monthly payrolls, one half of June monthly premiums were received in June. Likewise, the investments reported at June 30, 2002, increased over the previous year because the half-month of premiums were invested until paid to the insurance company in July. The decrease in other liabilities was primarily due to the timing of payments to the retirement funds for expenses allocated to the Internal Service Fund.

The decrease in premium refunds was attributable to the abnormally high volume of refunds noted in last year's report, which was a result of the conversion from premiums paid in advance to premiums paid in arrears at the time the state of Missouri converted to a lag payroll system. The decrease in investment income earned over the prior year was primarily attributable to the decrease in interest rates during the period.

The cash flow changes are primarily related to the timing of the premiums receipts and investment of those receipts noted above.

# FINANCIAL SECTION

# **Statements of Plan Net Assets**

### **Pension Trust Funds** As of June 30, 2002

	MSEP	ALJLAP	Judicial Plan	Total
Assets				
Cash and short-term investments	\$ 376,082,843	\$ 944,511	\$ 1,815,630	\$ 378,842,984
Receivables				
State contributions	10,570,238	43,902	923,241	11,537,381
Investment income	26,763,063	67,214	129,205	26,959,482
Investment sales	64,546,822	162,106	311,615	65,020,543
Other	163,587	411	790	164,788
Total receivables	102,043,710	273,633	1,364,851	103,682,194
Investments at fair value				
U.S. Treasury securities	736,425,427	1,849,490	3,555,271	741,830,188
Corporate bonds	566,586,679	1,422,950	2,735,333	570,744,962
Convertible bonds	203,259	510	981	204,750
Government bonds and government	,			ŕ
mortgage-backed securities	346,976,441	871,411	1,675,112	349,522,964
Real estate equity	5,617,518	14,108	27,120	5,658,746
Common stock	1,573,983,163	3,952,969	7,598,782	1,585,534,914
International EAFE index fund	291,886,165	733,055	1,409,151	294,028,371
Preferred stock	4,675,254	11,742	22,571	4,709,567
Venture capital	114,045	286	551	114,882
Real estate investment trust	252,699,364	634,640	1,219,967	254,553,971
Collateralized mortgage obligation	106,885,623	268,437	516,016	107,670,076
Foreign currency	19,286,540	48,437	93,110	19,428,087
International equities	902,549,151	2,266,701	4,357,273	909,173,125
U.S. dollar-denominated				
international corporate bonds	38,044,250	95,546	183,668	38,323,464
Total investments	4,845,932,879	12,170,282	23,394,906	4,881,498,067
Securities lending collateral	1,001,523,784	2,515,270	4,835,096	1,008,874,150
Fixed Assets				
Land	265,339	666	1,281	267,286
Building and building improvements	3,285,081	8,250	15,860	3,309,191
Furniture, fixtures, and equipment	2,052,117	5,154	9,907	2,067,178
	5,602,537	14,070	27,048	5,643,655
Accumulated depreciation	(1,729,072)	(4,342)	(8,348)	(1,741,762)
Total fixed assets	3,873,465	9,728	18,700	3,901,893
Prepaid expenses and other	58,167	146	281	58,594
Total assets	6,329,514,848	15,913,570	31,429,464	6,376,857,882
Liabilities				
Administrative expense payables	3,042,810	7,642	14,690	3,065,142
Investment purchases	298,859,765	750,569	1,442,817	301,053,151
Securities lending collateral	1,002,819,643	2,518,524	4,841,353	1,010,179,520
Real estate security deposits	31,020	78	150	31,248
Employee vacation and overtime liability	244,381	614	1,180	246,175
Total liabilities	1,304,997,619	3,277,427	6,300,190	1,314,575,236
Net assets held in trust for pension benefits	\$ 5,024,517,229	\$ 12,636,143	\$ 25,129,274	\$ 5,062,282,646

A schedule of funding progress for each plan is presented on page 36. See accompanying Notes to the Financial Statements.



# **Statements of Changes in Plan Net Assets**

## Pension Trust Funds Year Ended June 30, 2002

	MSEP	ALJLAP	Judicial Plan	Total
Additions				
Contributions	* 200 515 024	* 1050540	* 22 000 405	* 222 (5( 252
State contributions	\$ 209,515,026	\$ 1,072,562	\$ 22,088,485	\$ 232,676,073
Member purchases of service credit	3,913,426	0	0	3,913,426
Service transfer contributions	48,840	1,072,562	0	48,840
Total contributions	213,477,292	1,072,562	22,088,485	236,638,339
Investment income				
From investing activities				
Net depreciation in fair value of investments	(451,628,418)	(1,134,239)	(2,180,345)	(454,943,002)
Interest	66,079,964	165,956	319,017	66,564,937
Dividends	47,227,780	118,610	228,003	47,574,393
Other	1,060,237	2,663	5,119	1,068,019
Total investing activity loss	(337,260,437)	(847,010)	(1,628,206)	(339,735,653)
Investing activity expenses:				
Management fees	(8,876,193)	(22,292)	(42,852)	(8,941,337)
Custody fees	(1,011,361)	(2,540)	(4,883)	(1,018,784)
Consultant fees	(282,789)	(710)	(1,365)	(284,864)
Performance measurement fees	(251,732)	(632)	(1,215)	(253,579)
Portfolio transition/rebalancing cost	(159,479)	(401)	(770)	(160,650)
Internal investment activity expenses	(1,099,182)	(2,761)	(5,307)	(1,107,250)
Total investing activity expenses	(11,680,736)	(29,336)	(56,392)	(11,766,464)
Net loss from investing activities	(348,941,173)	(876,346)	(1,684,598)	(351,502,117)
From securities lending activities				
Securities lending income	31,150,251	78,232	150,385	31,378,868
Securities lending expenses				
Borrower rebates	(29,799,545)	(74,840)	(143,864)	(30,018,249)
Management fees	(515,590)	(1,295)	(2,489)	(519,374)
Total securities lending activities expenses	(30,315,135)	(76,135)	(146,353)	(30,537,623)
Net income from securities lending activities	835,116	2,097	4,032	841,245
Total net investment loss	(348,106,057)	(874,249)	(1,680,566)	(350,660,872)
Miscellaneous income	447,462	1,124	2,160	450,746
Total additions	(134,181,303)	199,437	20,410,079	(113,571,787)
Deductions				
Benefits	248,854,532	836,615	15,943,642	265,634,789
Benefit adjustments	19,626,450	0	0	19,626,450
Service transfer payments	27,970	0	0	27,970
Administrative expenses	5,753,812	14,450	27,778	5,796,040
Total deductions	274,262,764	851,065	15,971,420	291,085,249
Net increase (decrease)	(408,444,067)	(651,628)	4,438,659	(404,657,036)
2.50 Mereano (decreano)	(100,111,007)	(031,020)	1, 130,037	(101,037,030)
Net assets held in trust for pension benefits				
Beginning of year	5,432,961,296	13,287,771	20,690,615	5,466,939,682
End of year	\$ 5,024,517,229	\$ 12,636,143	\$ 25,129,274	\$ 5,062,282,646

See accompanying Notes to the Financial Statements.



## **Balance Sheet Internal Service Fund** As of June 30, 2002

Assets	
Premiums receivable	\$ 1,187,571
Investments at fair value	1,606,156
Total assets	\$ 2,793,727
Liabilities and net assets	
Liabilities	
Premiums payable	\$ 2,343,733
Checks outstanding net of deposits	5,520
Other	160,081
Total liabilities	2,509,334
Net assets	284,393
Total liabilities and net assets	\$ 2,793,727

See accompanying Notes to the Financial Statements.

# Statement of Revenues, Expenses, and Changes in Net Assets

Internal Service Fund Year Ended June 30, 2002

Operating revenues	
Premium receipts	\$ 24,753,708
Miscellaneous income	436,489
Total operating revenues	25,190,197
Operating expenses	
Premium disbursements	24,675,520
Premium refunds	78,188
Administrative expenses	439,232
Total operating expenses	25,192,940
Operating revenues under operating expenses	(2,743)
N	
Nonoperating revenues	
Investment income	47,767
Net revenues over expenses	45,024
Net assets July 1, 2001	239,369
Net assets June 30, 2002	\$ 284,393

See accompanying Notes to the Financial Statements.



# **Statement of Cash Flows**

### **Internal Service Fund** Year Ended June 30, 2002

Cash flows from operating activities			
Cash received from employer and members	\$	26	5,026,471
Premium payments to outside carriers			1,591,303)
Refunds of premiums to members			(78,188)
Cash payments to employees for services			(280,792)
Cash payments to other suppliers of goods and services			(235,897)
Net cash provided by operating activities	_		840,291
Cash flows from noncapital financing activities			
Implicit funding of checks outstanding net of deposits			5,520
Implicit repayment of prior years checks outstanding net of deposits			(10,122)
Net cash used in noncapital financing activities			(4,602)
Cash flows from investing activities			
Purchase of investment securities		(186	5,247,230)
Proceeds from sale and maturities of investment securities		•	5,363,774
Cash received from investment income		40.	47,767
Net cash used in investing activities	_		(835,689)
Net increase in cash	_		(833,087)
Cash balances June 30, 2001	_		0
Cash balances June 30, 2001  Cash balances June 30, 2002	•		0
Cash balances Julie 30, 2002	Ψ	_	
Reconciliation of operating revenues under operating expenses			
to net cash used in operating activities			
Operating revenues under operating expenses	\$		(2,743)
Adjustments to reconcile operating revenues under			
operating expenses to net cash provided by operating activities			
Change in assets and liabilities:			
Decrease in operational accounts receivable			836,293
Increase in operational accounts payable	_		6,741
Total adjustments	_		843,034
Net cash provided by operating activities	\$		840,291

See accompanying Notes to the Financial Statements.

### FINANCIAL SECTION



### Notes to the Financial Statements As of June 30, 2002

### 1. Plan Descriptions

#### Missouri State Employees' Plan (MSEP)

The MSEP is a single-employer, public employee retirement plan with two benefit structures known as the MSEP (closed plan) and MSEP 2000 (new plan) which are administered by the Missouri State Employees' Retirement System (MOSERS) in accordance with Sections 104.010 and 104.312 to 104.1215 of the Revised Statutes of Missouri (RSMo). As established under Section 104.320, RSMo, MOSERS is a body corporate and an instrumentality of the state. In the system are vested the powers and duties specified in sections 104.010 and 104.312 to 104.1215, RSMo and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes of sections 104.010 and 104.312 to 104.1215, RSMo.

Responsibility for the operation and administration of the system is vested in the MOSERS Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the MSEP is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Generally, all full-time state employees hired before July 1, 2000, who were not covered under another state-sponsored retirement plan are eligible for membership in the closed plan. All full-time state employees hired on or after July 1, 2000, are eligible for membership in the new plan. Members in the closed plan have the option at retirement to choose between the benefit structure of the closed plan or new plan.

As of June 30, 2002, membership in the MSEP consisted of the following:

Retirees and beneficia	ıries	
currently receiving	21,502	
Terminated employee	s entitled to,	
but not yet receiving	ng benefits	12,257
Active:		
Vested	35,217	
Nonvested	23,399	58,616
Total membership		92,375
=		

The MSEP provides for retirement, survivor, and disability benefits.

### MSEP (Closed Plan)

General state employees are fully vested for benefits upon receiving five years of credited service. Under the closed plan, general employees may retire with full benefits upon the earliest of attaining:

- Age 65 and active with 4 years of service
- Age 65 with 5 years of service
- Age 60 with 15 years of service
- Age 50 with age and service equaling 80 or more (Rule of 80)

General employees may retire early at age 55 with at least 10 years of service with reduced benefits.

The base benefit of the general employees in the closed plan is equal to 1.6% multiplied by the final average pay multiplied by years of credited service.

For members hired prior to August 28, 1997, cost-of-living adjustments (COLAs) are provided annually based on 80% of the change in the consumer price index (CPI) with a minimum rate of 4%, and maximum rate of 5%, until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.



Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least 5, but less than 10 years of service, be less than age 60, and have a benefit present value of less than \$10,000.

### MSEP 2000 (New Plan)

General state employees are fully vested for benefits upon receiving five years of credited service. Under the new plan, general employees may retire with full benefits upon the earliest of attaining:

- Age 62 with 5 years of service
- Age 50 with age and service equaling 80 or more (Rule of 80)

General employees may retire early at age 57 with at least 5 years of service with reduced benefits.

The base benefit of the general employees in the new plan is equal to 1.7% multiplied by final average pay multiplied by years of credited service. For those retiring under Rule of 80, an additional temporary benefit equivalent to 0.8% multiplied by final average pay multiplied by years of credited service is payable until age 62.

COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.

For a more detailed summary of benefits for general employees and a description of benefits available to legislators and elected officials under MSEP, refer to the Summary Plan Provisions contained in the Actuarial Section of this report on page 96.

The state of Missouri is required to make all contributions to the MSEP. Prior to September 1, 1972, contributions by members were required. Accumulated employee contributions made prior to that time, plus interest through August 28, 1997, are refundable to the member or designated beneficiaries.

### Administrative Law Judges and Legal Advisors' Plan (ALJLAP)

The ALJLAP is a single-employer, public employee retirement plan administered in accordance with Sections 287.812 to 287.856, RSMo. Responsibility for the operation and administration of the system is vested in the MOSERS Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the ALJLAP is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Individuals appointed or employed as administrative law judges or legal advisors in the Division of Workers' Compensation, members of the Labor and Industrial Relations Commission and their attorneys, the chairperson of the State Board of Mediation, and administrative hearing commissioners are eligible for membership in the ALJLAP.

On June 30, 2002, membership in the ALJLAP consisted of the following:

Retirees and beneficiario	es	
currently receiving be	enefits	25
Terminated employees e	entitled to,	
but not yet receiving	benefits	19
Active:		
Vested	58	
Nonvested	0	58
Total membership		102

The ALJLAP provides retirement, death, and disability benefits. Members are immediately eligible for benefits.

Under the ALJLAP, members may retire with full benefits upon the earliest of attaining:

- Age 62 with 12 years of service
- Age 60 with 15 years of service
- Age 55 with 20 years of service

Employees may retire early at age 65 with less than 12 years of service with a reduced benefit that is based upon years of service relative to 12 years.

#### FINANCIAL SECTION



In the ALJLAP, the base benefit for members with 12 or more years of service is equivalent to 50% of the average highest 12 consecutive months of salary.

For members hired prior to August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI with a minimum rate of 4%, and maximum rate of 5%, until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.

Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least 5, but less than 10 years of service, be less than age 60, and have a benefit present value of less than \$10,000.

For a more detailed summary of benefits for members of the ALJLAP, refer to the Summary Plan Provisions contained in the Actuarial Section of this report on page 100.

The state of Missouri is required to make all contributions to the ALJLAP.

#### Judicial Plan

The Judicial Plan is a single-employer, public employee retirement plan administered in accordance with Sections 476.445 to 476.690, RSMo. Responsibility for the operation and administration of the Judicial Plan is vested in the MOSERS Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Judicial Plan is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Judges and commissioners of the supreme court or the court of appeals, judges of the circuit court, probate court, magistrate court, court of common pleas, court of criminal corrections, or a justice of the peace, or a commissioner or

deputy commissioner of the circuit court appointed after February 29, 1972, are eligible for membership in the Judicial Plan.

On June 30, 2002, membership in the Judicial Plan consisted of the following:

Retirees and beneficiar	ies	
currently receiving l	penefits	383
Terminated employees	entitled to,	
but not yet receiving	g benefits	63
Active:		
Vested	392	
Nonvested	0	392
Total membership		838

The Judicial Plan provides retirement, death, and disability benefits. Members are immediately eligible for benefits.

Under the Judicial Plan, members may retire with full benefits upon the earliest of attaining:

- Age 62 with 12 years of service
- Age 60 with 15 years of service
- Age 55 with 20 years of service

Employees may retire early at age 62 with less than 12 years of service or age 60 with less than 15 years of service with a reduced benefit that is based upon years of service relative to 12 or 15 years.

In the Judicial Plan, the base benefit for members with 12 or more years of service is equivalent to 50% of the final average pay.

For members hired prior to August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI with a minimum rate of 4%, and maximum rate of 5%, until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%. Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least 5, but less than 10 years of service, be less than age 60, and have a benefit present value of less than \$10,000.



For a more detailed summary of benefits for members of the Judicial Plan, refer to the Summary Plan Provisions contained in the Actuarial Section of this report on page 101.

Funding of the Judicial Plan on an actuarial basis began on July 1, 1998. The state of Missouri is required to make all contributions to the Judicial Plan.

#### Missouri State Insurance Plan

The Missouri State Insurance Plan is accounted for as an Internal Service Fund of the state of Missouri and is administered by MOSERS. It provides basic life insurance in an amount equal to one-times annual salary while actively employed (with a \$15,000 minimum) to the following:

- Eligible members of the MSEP (except employees of the Missouri Department of Conservation, and the state colleges and universities)
- Members of the ALJLAP
- Members of the Judicial Plan
- Certain members of the Public School Retirement System (PSRS)

The plan also provides duty-related death benefits, optional life insurance for active employees and retirees who are eligible for basic coverage, and a long-term disability plan for certain eligible members. For a more detailed description of insurance benefits, refer to Life Insurance Plans in the Actuarial Section of this report on page 102.

Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Missouri State Insurance Plan is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as an Internal Service Fund.

### 2. Summary of Significant Accounting **Policies and Plan Asset Matters**

#### Basis of Accounting

The financial statements of the MSEP, the ALJLAP, the Judicial Plan, and the Missouri State Insurance Plan were prepared using the accrual basis of accounting. Contributions are recognized as revenues in the period in which employee services are performed, and expenses are recorded when the corresponding liabilities are incurred, regardless of when contributions are received or payment is made. The direct method of reporting cash flows is used. For its proprietary activities, MOSERS applies all Financial Accounting Standards Board (FASB) statements and interpretations issued after November 30, 1989, except for those that conflict with or contradict Governmental Accounting Standards Board (GASB) pronouncements.

#### Cash

Cash balances represent both operating cash accounts held by the banks and investment cash on deposit with the investment custodian. To maximize investment income, the float caused by outstanding checks is invested, thus causing a possible negative book balance. The negative book balance has been reflected in the liabilities section of the balance sheet of the Internal Service Fund. The negative book balance has been included in the cash and short-term investments on the Statements of Plan Net Assets of the pension trust funds. The following is a schedule of the aggregate book and bank balances of all cash accounts. All deposits are fully insured by the Federal Deposit Insurance Corporation (FDIC). In addition to the FDIC insurance coverage on the accounts of MOSERS, the bank pledged the following securities to MOSERS on June 30, 2002, as collateral for overnight repurchase agreements:

- \$1,000,000 FFCB Discount Note (*Maturity Date 07/01/2002*)
- \$939,852 Small Business Association Pool # 505639 (Maturity Date 10/01/2011)
- \$1,105,086 Small Business Association Pool # 504889 (Maturity Date 01/25/2012)
- \$950,470 Small Business Association Pool # 503520 (Maturity Date 06/01/2016)
- \$978,015 Small Business Association Pool # 505528 (Maturity Date 12/01/2020)
- \$753,663 Small Business Association Pool # 504354 (Maturity Date 11/25/2023)

Internal Service Fund

#### Cash Balances Book Bank Pension Trust Funds \$(7,306,100) \$2,167,942 \$(5,520) \$366

#### **FINANCIAL SECTION**



#### Method Used to Value Investments

Investments of the pension trust funds and the Internal Service Fund are reported at fair value.

The schedule on the following page provides a summary of the fair values of the investments as reported on the Statements of Plan Net Assets of the Pension Trust Funds and Balance Sheet of the Internal Service Fund. Fair values for the equity real estate investments are based on appraisals. Fair values of the venture capital investments are based on valuations of the underlying companies of the limited partnerships. Fair value of the EAFE index fund is determined based on the underlying assets in the fund. The remaining assets are primarily valued by the investment custodian using the last trade price information supplied by various pricing data vendors. On June 30, 2002, the system did not have investments in any one organization, other than those issued by the U.S. government, which represented greater than 5% of plan net assets.

#### Categories of Asset Risks

All investments are governed primarily by an investment doctrine known as the prudent person rule. The prudent person rule, as set forth by state law, establishes a standard for all fiduciaries, which includes anyone who has authority with respect to the funds. The Governmental Accounting Standards Board Statement Number 3 requires disclosure of investment securities within the following three categories of custodial credit risk. Category 1 includes investments that are insured or registered or which are held by the system or its agent in the system's name. Category 2 includes uninsured and unregistered investments, which are held by the counterparty's trust departments or agent in the system's name. Category 3 includes uninsured and unregistered investments, which are held by the counterparty, its trust department, or agent but not in the system's name.

A security, for purposes of classification in the above categories, is a transferable financial instrument that evidences ownership or creditorship. Securities do not include investments made with another party, real estate, or direct investments in mortgages and other loans. Investments in open-end mutual funds, annuity contracts, and guaranteed investment contracts are also not considered securities for purposes of custodial credit risk classification. Such investments are shown as not subject to classification.

#### Derivatives

In accordance with its investment policy, MOSERS, through its external investment managers, holds investments in futures contracts, swap contracts, and forward foreign currency exchange contracts. The tables on pages 32-33 detail the various contracts in the portfolio as of June 30, 2002.



# **Investments** As of June 30, 2002

\$ 1,404,423,233		
\$ 1,404,423,233		
\$ 1,404,423,233	de	
\$ 1,404,423,233		# 1 404 422 222
	\$	\$ 1,404,423,233
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		38,323,464
4,709,567		4,709,567
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26,462,264		26,462,264
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342,793,124		342,793,124
050.007.440		050 005 (10
		972,835,610
		204,750
3,655,800,077		3,655,800,077
2 204 401	1 (0( 15)	2 000 557
		3,890,557
2,284,401	1,606,156	3,890,557
181,111,681 43,125,060 715,367,924 32,259,102 6,729,840 958,389,084 107,670,076 5,658,746 254,553,971 294,028,371 19,428,087 114,882 2,618,436,824		181,111,681 43,125,060 715,367,924 32,259,102 6,729,840 958,389,084 107,670,076 5,658,746 254,553,971 294,028,371 19,428,087 114,882 2,618,436,824
\$ 6,276,521,302	\$ 1,606,156	\$ 6,278,127,458
\$ 6,276,521,302 (2,284,401) (383,864,684) (574,524,400) (434,349,750)		
	38,323,464 4,709,567 26,462,264 342,793,124 972,835,610 204,750 3,655,800,077 2,284,401 2,284,401 2,284,401 181,111,681 43,125,060 715,367,924 32,259,102 6,729,840 958,389,084 107,670,076 5,658,746 254,553,971 294,028,371 19,428,087 114,882 2,618,436,824 \$ 6,276,521,302 \$ 6,276,521,302 \$ 6,276,521,302	38,323,464 4,709,567 26,462,264 342,793,124 972,835,610 204,750 3,655,800,077 2,284,401 1,606,156 2,284,401 1,606,156 181,111,681 43,125,060 715,367,924 32,259,102 6,729,840 958,389,084 107,670,076 5,658,746 254,553,971 294,028,371 19,428,087 114,882 2,618,436,824 \$ 6,276,521,302 (2,284,401) (383,864,684) (574,524,400) (434,349,750)

### FINANCIAL SECTION



### **Futures Contracts**

Туре	Long/Short	Notional Amount	Exposure
S&P 500 Index Futures	Long	\$ 123,523,525	\$ (209,109)
90 Day Eurodollar Futures (CME)	Long	23,204,550	(200)
90 Day Eurodollar Futures	Short	(36,647,363)	863
Alum HG Futures (LME)	Long	1,417,832	
Brent Crude Futures	Long	5,978,400	(4,700)
Cattle Feeder Futures (CME)	Long	453,000	(1,500)
Cocoa Futures	Long	230,580	(840)
Coffee Futures	Long	311,419	(319)
Copper Futures (CMX)	Long	462,600	( )
Corn Futures	Long	2,504,750	(8,063)
Cotton No. 2 Futures (CTN)	Long	990,600	54,000
Crude Oil Futures	Long	14,020,920	,
DJ EURO STOXX 50 Futures	Closed	1,,020,,20	445,277
FTSE 100 Index Futures	Closed		214,755
Gas Oil Futures (IPE)	Long	197,837,500	(4,750)
Gasoline NY UNLD Futures (NYM)	Long	405,772,500	(43,575)
Gold 100 Oz Futures (CMX)	Long	1,130,040	(20,520)
Heating Oil Futures NYM	Long	382,092,480	15,523
Lean Hogs Futures (CME)	Long	1,140,090	9,150
Live Cattle Futures CME	Long	2,313,220	4,550
LME Lead Futures	Long	123,338	1,550
MSCI Taiwan Index	Long	9,904,950	174,000
Natural Gas Futures (NYM)	Long	4,385,820	12,060
Nickel Futures (LME)	Long	338,448	12,000
Orange Juice Futures	Long	342,375	563
Platinum Futures	Long	106,260	(440)
Silver Futures (CMX)	Long	121,375	(1,075)
Soybean Futures (CBT)	Long	1,241,538	37,363
SPI 200 Index Futures	Closed	1,2 :1,500	(132)
Sugar #11 Futures	Long	633,293	(30,643)
Topix Index Futures	Closed	000,270	200,899
U.S. 10 Yr. Treasury Notes Futures	Long	750,641	3,854
U.S. 2 Yr. Treasury Notes Futures (CBT)	Closed	750,011	9,915
U.S. 5 Yr. Treasury Notes Futures	Short	(38,886,719)	8,791
U.S. Treasury Bonds Futures (CBT)	Long	12,230,969	(14,875)
Wheat Futures (KCB)	Long	868,725	(11,075)
Wheat Futures (CBT)	Long	2,284,900	(22,825)
Zinc Futures (LME)	Long	298,313	(22,023)
Total	20116	\$ 1,121,480,869	\$ 827,997
10(a)		Ψ 1,141,700,009	Ψ 041,771

### Swaps

Туре	MOSERS Receives	MOSERS Pays	Notional Amount	Counterparty Exposure	Counterparty
S&P 500 Index TR					
to LIBOR	S&P 500 Index Total Return	LIBOR plus 0.14%	\$ 28,965,008	\$ 23,756	JP Morgan
T-Bills to LIBOR	Treasury Bills plus 0.72%	LIBOR	75,000,000	360,943	Goldman Sachs
GSCI to T-Bills	GSCI Total Return minus 0.60%	Treasury Bills	74,860,000	2,339,958	Goldman Sachs
Chile Index to LIBOR	MSCI Chile Index in U.S. \$	LIBOR minus 1.00%	3,000,000	(170,592)	Morgan Stanley
India Index to LIBOR	MSCI India Index in U.S. \$	LIBOR minus 2.00%	1,300,000	10,170	Lehman Brothers
EMF Index to LIBOR	MSCI EMF Index in U.S. \$	LIBOR minus 1.25%	16,000,000	(254,265)	Morgan Stanley
EMF Index to LIBOR	MSCI EMF Index in U.S. \$	LIBOR minus 1.00%	9,000,000	(1,395,653)	Morgan Stanley
Samsung Electronics	Equity Price/KRW FX rate	5.00%	6,460,084	439,293	Salomon Smith Barney
India Index to LIBOR	MSCI India Index in U.S. \$	LIBOR minus 2.68%	3,500,000	(127,970)	Lehman Brothers
Russia Index to LIBOR	MSCI E.M. Russia Index in U.S. \$	LIBOR minus 2.75%	2,000,000	110,118	Lehman Brothers
Total			\$220,085,092	\$ 1,335,758	





Туре	Call/Put, Expiration	Long/Short Strike Price	Contracts	Book Value	Market Value	Exposure
S&P 500 Index S&P 500 Index Total	CALL, SEP 02, 1125 PUT, SEP 02, 1125	Long Short	200 (200)	\$ 1,180,500 (1,499,478) \$ (318,978)	\$ 62,000 (2,747,000) \$ (2,685,000)	\$ (1,118,500) (1,247,523) \$ (2,366,023)

#### Currency Forwards

Туре	Long/Short	Book Value	Market Value	Counterparty Exposure	Counterparty
Australian dollar	Long	\$ 13,562,730	\$ 14,788,797	\$ 1,226,067	Mellon Bank, London
Australian dollar	Short	(1,952,369)	(1,953,358)	(989)	Mellon Bank, London
Brazil real	Short	(2)	(2)	0	Mellon Bank
British pound sterling	Long	8,637,608	8,836,194	198,586	Lehman Brothers, New York
British pound sterling		8,527,982	8,751,656	223,674	Mellon Bank, London
British pound sterling		(8,850,911)	(8,836,194)	14,717	Lehman Brothers, New York
British pound sterling		(55,690,901)	(60,255,494)	(4,564,593)	Mellon Bank, London
Euro currency unit	Long	8,839,460	8,842,901	3,441	Goldman Sachs, New York
Euro currency unit	Long	11,906,614	12,315,149	408,535	Lehman Brothers, New York
Euro currency unit	Long	48,823,441	55,519,916	6,696,475	Mellon Bank, London
Euro currency unit	Short	(52,289)	(52,159)	130	Goldman Sachs, New York
Euro currency unit	Short	(12,340,656)	(12,315,149)	25,507	Lehman Brothers, New York
Euro currency unit	Short	(8,042,827)	(8,348,958)	(306,131)	Mellon Bank
Hong Kong dollar	Long	2,564	2,564		Mellon Bank
Hong Kong dollar	Long	1,061,971	1,061,868	(103)	Mellon Bank, London
Hong Kong dollar	Short	(6,695,268)	(6,729,927)	(34,659)	Mellon Bank, London
Hungarian forint	Short	(4)	(4)	0	Mellon Bank
Japanese yen	Long	1,303,498	1,295,015	(8,483)	Goldman Sachs, New York
Japanese yen	Long	8,158,186	8,545,608	387,422	Lehman Brothers, New York
Japanese yen	Long	235,011	234,933	(78)	Mellon Bank, London
Japanese yen	Short	(2,498,016)	(2,494,658)	3,358	Goldman Sachs, New York
Japanese yen	Short	(8,628,620)	(8,545,608)	83,012	Lehman Brothers, New York
Malaysian Ringgit	Short	(4,104)	(4,109)	(5)	Standard Chartered Bank, Kuala Lumpur
Norwegian Krone	Long	311,345	311,009	(336)	Goldman Sachs, New York
Norwegian Krone	Short	(827,164)	(826,778)	386	Goldman Sachs, New York
South Korean won	Short	(1,843,136)	(1,844,974)	(1,838)	Standard Chartered Bank, Seoul Korea
Swiss Franc	Long	4,181,747	4,171,012	(10,735)	Goldman Sachs, New York
Swiss Franc	Long	167,667	167,667		Mellon Bank, London
U.S. dollar	Long	3,377,469	3,377,469		Goldman Sachs, New York
U.S. dollar	Long	29,820,187	29,820,187		Lehman Brothers, New York
U.S. dollar	Long	6	6		Mellon Bank
U.S. dollar	Long	4,104	4,104		Standard Chartered Bank, Kuala Lumpur
U.S. dollar	Long	1,843,136	1,843,136		Standard Chartered Bank, Seoul Korea
U.S. dollar	Short	(14,636,051)	(14,636,051)		Goldman Sachs, New York
U.S. dollar	Short	(28,702,408)	(28,702,408)		Lehman Brothers, New York
Total		\$ 0	\$ 4,343,360	\$ 4,343,360	

MOSERS does not anticipate additional significant market risk from the swap arrangements. Forward foreign currency exchange contracts are used primarily to hedge against changes in exchange rates related to foreign equities, primarily denominated in European and Asian currencies.

MOSERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. MOSERS' investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring

procedures. MOSERS anticipates that the counterparties will be able to satisfy their obligations under the contracts.

MOSERS invests in mortgage-backed securities which are reported at fair value in the Statements of Plan Net Assets and are based on the cash flows from interest and principal payments by the underlying mortgages. As a result, they are sensitive to prepayments by mortgagees, which may result from a decline in interest rates, thereby reducing the value of these securities.



#### Securities Lending Program

The board of trustees' investment policy permits the pension trust funds to participate in a securities lending program. Certain securities of the pension trust funds are loaned to participating brokers who provide collateral in the form of cash, U.S. Treasury or government agency securities, or letters of credit issued by approved banks. Collateral must be provided in the amount of 102% of market value for domestic loans and 105% of market value for international loans. Securities on loan at fiscal year end for cash collateral are presented as not subject to classification in the schedule on page 31; securities on loan for non-cash collateral are classified according to the category pertaining to the collateral. On June 30, 2002, MOSERS had no credit risk exposure to borrowers because the amounts MOSERS owes the borrowers exceed the amounts the borrowers owe MOSERS.

As of June 30, 2002, Credit Suisse/First Boston, New York Branch (CSFBNY), served as the agent for the fixed income securities lending program. In this capacity, CSFBNY lends the fixed income securities to a diverse group of dealers on behalf of MOSERS. Indemnification against dealer default is provided by CSFBNY, a "AA-rated" bank. As with each of MOSERS' securities lending programs, the majority of the fixed income loans are open loans and can be terminated on demand by either MOSERS or the borrower. Net income from the fixed income securities lending program is split on an 80/20 basis between MOSERS and CSFBNY respectively.

As of June 30, 2002, CSFB Corporation (CSFB Corp.), a broker-dealer, was the exclusive borrower of MOSERS' international equity securities. In this program MOSERS receives a fee from CSFB Corp. that is guaranteed by CSFBNY, the "AA-rated" parent bank. Guaranteed net income in this program is calculated as a fixed percentage of the international equity securities available for loan.

As of June 30, 2002, Lehman Brothers, a broker-dealer, was the exclusive borrower of the MOSERS' domestic equity securities. In this program, MOSERS receives a fixed annual fee from Lehman Brothers that is guaranteed. The guaranteed fee is renegotiated on a periodic basis to adjust for changes in the securities lending business climate.

Daily monitoring of securities that are on loan ensure proper collateralization levels and mitigate counterparty risk. Cash collateral from all three programs is commingled and invested in a separately managed short-term investment fund for MOSERS. This cash collateral fund is managed by CSFBNY. On June 30, 2002, the cash collateral fund had a market value of \$1,011,313,160 and a weighted average maturity of 25 days. For all of the securities lending operational services, the custodian is paid an annual fee, which is netted out against MOSERS' earnings in the securities lending programs managed by Lehman Brothers and CSFB.

During the fiscal year ended June 30, 2002, an error was discovered in the amount recorded as securities lending rebates for the fiscal year ended June 30, 2001. Rebates in the amount of \$4,068,350 were not recorded until fiscal year 2002 as a result of the transition of investment custodians at the end of fiscal year 2001. Although this error was not deemed to be material to the financial statements as a whole, when comparing the total net income from securities lending activities for fiscal years 2001 and 2002, those amounts would have been reported as \$5,835,058 and \$4,909,595, respectively.

#### Office Building, Equipment, and Fixtures

Office building, equipment, and fixtures are capitalized at cost when acquired. Improvements, which increase the useful life of the property, are capitalized. Maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straightline method over the estimated useful life of the related assets according to the following schedule:

5 years for furniture, fixtures, equipment 40 years for building



#### 3. Contributions and Reserves

The MSEP, the ALJLAP, and the Judicial Plan are pension plans covering substantially all state of Missouri employees, administrative law judges and legal advisors in the Division of Workers' Compensation, and judges. The state of Missouri is obligated by state law to make all required contributions to the plans. The required contributions are expressed as a level percentage of covered payroll and are actuarially determined using an individual entry-age actuarial cost method. The unfunded accrued liabilities are amortized over a closed 33-year period. Costs of administering the plans are financed from the assets of the pension trust funds.

### 4. Other Post-employment Benefits (OPEB)

In addition to the retirement benefits provided through MOSERS, the state of Missouri also funds, either partially or in its entirety, OPEB for eligible retirees as follows:

#### Retiree Life Insurance

Members, who retire on or after October 1, 1985, are eligible for \$5,000 of state-sponsored, basic life insurance coverage if they retire directly from active employment. As of June 30, 2002, 10,822 retirees were eligible and participating in the program. The coverage is financed on a pay-as-you-go basis and is purchased as a group policy through competitive bids at a current cost of \$10.35 per month per eligible participant (\$1,283,090 for the year ended June 30, 2002). Premiums are paid entirely by the state as provided for by Section 104.515, RSMo.

Retirees of the Department of Labor and Industrial Relations (DOLIR), who retired prior to January 1, 1996, are eligible for statesponsored life insurance coverage in the same amount of coverage they were receiving through the DOLIR. As of June 30, 2002, 612 retirees were eligible and participating in the program. The coverage is financed on a pay-asyou-go basis and is purchased as a group policy through competitive bids at a current cost of \$2.07 per thousand dollars of coverage, per month, per eligible participant (\$69,549 for the year ended June 30, 2002). Premiums are paid entirely by the DOLIR as provided for by Section 228.225, RSMo. Retirees of the DOLIR who retired on or after January 1, 1996, are eligible for \$5,000 of state-sponsored life insurance coverage if they retire directly from active employment. They are included in the group described in the preceding paragraph.

#### 5. Plan Termination

MOSERS and its related plans are administered in accordance with Missouri statutes. The statutes do not provide for termination of the plans under any circumstances.

#### 6. Contingencies

Included in MOSERS' real estate investments is a property located in Kansas City, Missouri, which has been found to have hazardous substance contamination. MOSERS is currently participating in the Petroleum Storage Tank Insurance Fund administered by the Missouri Department of Natural Resources in order to delineate the scope and magnitude of the contamination and determine what appropriate remedial action is needed. Based on the available information, the system's management believes it is not reasonably possible to predict the amount of additional expense MOSERS may incur. Accordingly, no provision has been made in the accompanying financial statements for this matter.



# **Required Supplementary Information Schedules of Funding Progress**

## Pension Trust Funds

#### **MSEP**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/1997	\$ 3,580,974,502	\$ 4,484,047,801	\$ 903,073,299	79.9%	\$ 1,359,656,666	66.4%
6/30/1998	4,210,635,094	4,918,887,183	708,252,089	85.6	1,459,712,203	48.5
6/30/1999	4,908,820,033	5,505,968,629	597,148,596	89.2	1,564,552,532	38.2
6/30/2000	5,511,714,616	5,920,684,192	408,969,576	93.1	1,683,697,080	24.3
6/30/2001	5,881,232,850	6,065,166,716	183,933,866	97.0	1,758,190,268	10.5
6/30/2002	6,033,133,598	6,294,272,275	261,138,677	95.9	1,773,283,484	14.7

### ALJLAP

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/1997	\$ 8,864,395	\$ 11,427,181	\$ 2,562,786	77.6%	\$ 2,865,733	89.4%
6/30/1998	10,285,233	12,886,908	2,601,675	79.8	2,806,436	92.7
6/30/1999	11,763,737	14,774,525	3,010,788	79.6	3,488,698	86.3
6/30/2000	13,191,825	16,521,743	3,329,918	79.8	4,072,888	81.8
6/30/2001	14,410,199	16,809,962	2,399,763	85.7	4,661,020	51.5
6/30/2002	15,172,619	18,175,342	3,002,723	83.5	4,779,504	62.8

### Judicial Plan

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/1997	\$ 0	\$ 197,472,573	\$ 197,472,573	0.0%	\$ 31,663,101	623.7%
6/30/1998	0	207,579,797	207,579,797	0.0	32,446,141	639.8
6/30/1999	6,067,305	227,802,341	221,735,036	2.7	34,162,013	649.1
6/30/2000	13,861,769	241,797,341	227,935,572	5.7	37,107,487	614.3
6/30/2001	22,613,050	247,978,904	225,365,854	9.1	38,687,793	582.5
6/30/2002	29,651,113	256,115,452	226,464,339	11.6	40,068,744	565.2

See Notes to the Schedules of Required Supplementary Information.



# **Required Supplementary Information Schedules of Employer Contributions** Pension Trust Funds

#### **MSEP**

Year Ended June 30	Annual Rec Percent	quired Contribution Dollar Amount	Percentage Contributed
1997	10.66%	\$ 146,383,371	100%
1998	10.40	152,090,687	100
1999	12.58	197,909,834	100
2000	11.91	202,330,547	100
2001	11.59	215,750,128	100
2002	11.59	209,515,026	100

### **ALJLAP**

Year Ended	Annual Red	Percentage	
June 30	Percent	Percent Dollar Amount	
1997	22.60%	\$ 652,709	100%
1998	19.66	564,295	100
1999	18.70	639,285	100
2000	20.10	807,022	100
2001	22.32	1,074,946	100
2002	22.32	1,072,562	100

### Judicial Plan

Year Ended	Annual Req	uired Contribution	Percentage
June 30	Percent	Dollar Amount	Contributed
1997	46.50%	\$ 14,723,342	71%
1998	45.91	14,896,023	77
1999	51.81	17,862,353	100
2000	53.92	19,988,676	100
2001	55.30	22,473,913	100
2002	55.30	22,088,485	100

See Notes to the Schedules of Required Supplementary Information. See accompanying Independent Auditors' Report.

# **FINANCIAL SECTION**

# Notes to the Schedules of Required Supplementary Information June 30, 2002

#### Actuarial Methods and Assumptions for Valuations Performed June 30, 2002

The entry-age actuarial cost method of valuation is used in determining liabilities and normal cost. Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded, actuarial accrued liabilities are amortized to produce payments (principal and interest), which are expressed as a percent of payroll. A closed 33-year amortization period was used for the June 30, 2002, valuations. The actuarial value of assets is based on a method that fully recognizes expected investment return and averages unanticipated market return over a 5-year period. The investment return rate assumption used is 8.5% per year, compounded annually (net after investment expenses). The price inflation assumption used is 3.5% per year. Projected salary increase assumptions are based on 4% per year for wage inflation plus an additional 0% to 2.7% per year for the MSEP and 0% to 1.6% per year for the ALJLAP and the Judicial Plan (depending on age, attributable to seniority, and/or merit increases). The assumption used for annual post-retirement benefit increases is 4% (on a compound basis), when a minimum COLA of 4% is in effect, and 2.8% (on a compound basis), when no minimum COLA is in effect.



#### **Factors That Have Significantly Affected Trends**



1997 - During the year ended June 30, 1997, the MSEP experienced a net change of \$1,043,921,000 in the actuarial accrued liability. Of the change, \$660,195,000 was attributable to plan amendments, and \$53,365,000 was attributable to a change in actuarial assumptions.

During the year ended June 30, 1997, the ALJLAP experienced a net change of \$1,150,818 in the actuarial accrued liability. Of the change, \$1,055,550 was attributable to plan amendments.

During the year ended June 30, 1997, the Judicial Plan experienced a net change of \$35,738,463 in the actuarial accrued liability. Of the change, \$23,140,721 was attributable to plan amendments.

The actuarial valuations as of June 30, 1997, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 1999.

	<u>Amount</u>	Percent of Payroll
MSEP		·
Change in benefits and assumptions	\$ 44,188,842	3.25%
Experience and nonrecurring items	(14,548,326)	(1.07)
ALJLAP		
Change in benefits and assumptions	45,565	1.59
Experience and nonrecurring items	(73,076)	(2.55)
Judicial Plan		
First year for funding of benefits previously	16 404 652	<b>E1 01</b>
paid on a pay-as-you-go basis	16,404,653	51.81

1998 - The actuarial valuations as of June 30, 1998, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2000.

	<u>Amount</u>	Percent of Payroll
MSEP Experience and nonrecurring items	\$ (9,780,072)	(0.67)%
ALJLAP Experience and nonrecurring items	39,290	1.40
Judicial Plan Experience and nonrecurring items	684,614	2.11



1999 - The actuarial valuations as of June 30, 1999, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2001.

<b>Amount</b>	Percent of Payroll
	•
\$ 6,258,206	0.40%
(11,264,771)	(0.72)
72,914	2.09
4,535	.13
321,123	.94
150,313	.44
	\$ 6,258,206 (11,264,771) 72,914 4,535

2000 - The actuarial valuations as of June 30, 2000, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2002.

	Amount	Percent of Payroll
MSEP		•
Change in assumptions	\$ (5,051,091)	(.30)%
Experience and nonrecurring items	(10,438,922)	(.62)
ALJLAP		
Change in assumptions	36,656	.90
Experience and nonrecurring items	(51,726)	(1.27)
Judicial Plan		
Change in assumptions	(315,414)	(.85)
Experience and nonrecurring items	(352,521)	(.95)



2001 - The actuarial valuations as of June 30, 2001, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2003.

	Amount	Percent of Payroll
MSEP		•
Change in assumptions	\$ (41,844,928)	(2.38)%
Release of asset funding margin	(15,647,893)	(.89)
Change in asset valuation method	(3,868,019)	(.22)
Plan experience	12,483,151	.71
ALJLAP		
Change in assumptions	(105,339)	(2.26)
Change in amortization of UAAL	(88,559)	(1.90)
Change in asset valuation method	(4,195)	(.09)
Plan experience	49,873	1.07
Judicial Plan		
Change in assumptions	(1,133,552)	(2.93)
Change in asset valuation method	(197,308)	(.51)
Plan experience	441,041	1.14

2002 - The actuarial valuations as of June 30, 2002, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2004.

<u>Amount</u>	Percent of Payroll
	•
\$ (2,701,620)	(.35)%
6,869,835	.89
(20,074)	(.42)%
23,420	.49
(208,357)	(.52)%
32,055	.08
	\$ (2,701,620) 6,869,835 (20,074) 23,420 (208,357)

# **FINANCIAL SECTION**

# Schedule of Investment Expenses

## **Pension Trust Funds** Year Ended June 30, 2002

	MSEP	ALJLAP	Judicial Plan	Total
Investing activity				
Investment management fees				
Fixed income managers BlackRock Financial Management L.P. Hoisington Investment Management Company	\$ 723,046	\$ 1,816	\$ 3,491	\$ 728,353
	198,542	499	959	200,000
Equity managers  Domestic equities  AIM S&P  Americap Advisors	186,134	467	899	187,500
	390,737	981	1,886	393,604
Capital Guardian Trust Dimensional Fund Advisors Inc. Oak Associates, Ltd. OakBrook Investments	415,442	1,043	2,006	418,491
	579,976	1,457	2,800	584,233
	1,287,449	3,233	6,215	1,296,897
	248,179	623	1,198	250,000
Legg Mason Zak Capital, Inc.  International equities Merrill Lynch EAFE	631,835	1,587	3,050	636,472
	229,632	577	1,108	231,317
	428,683	1,077	2,070	431,830
Merrill Lynch Emerging Markets	159,479	401	770	160,650
Mastholm Investment Managers	1,538,333	3,863	7,427	1,549,623
Silchester International Investors	1,642,066	4,124	7,927	1,654,117
Other managers Venture capital				
Brinson Partners, Inc.  Diversification pool	1,294	3	6	1,303
NISA Investment Advisors, LLC	215,366	541	1,040	216,947
Total investment management fees	8,876,193	22,292	42,852	8,941,337
Other investment fees Investment consultant fees				
Summit Strategies, Inc. Lend Lease Rosen Investment custodial fees	272,862	685	1,317	274,864
	9,927	25	48	10,000
Mellon Bank Performance measurement fees	1,011,361	2,540	4,883	1,018,784
Mellon Bank Portfolio rebalancing costs	251,732	632	1,215	253,579
NISA Investment Advisors, LLC  Internal investment activity expenses  Total investing activity expenses	159,479	401	770	160,650
	1,099,182	2,761	5,307	1,107,250
	11,680,736	29,336	56,392	11,766,464
Securities lending activity				
Securities lending borrower rebates Securities lending management fees	29,799,545	74,840	143,864	30,018,249
Mellon Bank	269,276	676	1,300	271,252
Credit Suisse First Boston	246,314	619	1,189	248,122
Total securities lending activity expenses	30,315,135	76,135	146,353	30,537,623
Total investment expenses	\$41,995,871	\$105,471	\$202,745	\$42,304,087



# Schedule of Internal Investment Activity Expenses

## **Pension Trust Funds** Year Ended June 30, 2002

	MSEP	ALJLAP	Judicial Plan	Total
Personnel services				
Salaries	\$ 664,800	\$ 1,670	\$ 3,209	\$ 669,679
Employee fringe benefits	160,437	403	775	161,615
Total personnel services	825,237	2,073	3,984	831,294
Professional services				
Attorney services	21,152	53	102	21,307
Consulting services	6,116	15	30	6,161
Total professional services	27,268	68	132	27,468
Communications				
Telephone	1,257	3	6	1,266
Total communications	1,257	3	6	1,266
Equipment				
Maintenance	33,332	84	161	33,577
Total equipment	33,332	84	161	33,577
Travel and meetings				
Staff travel and meetings	35,398	89	171	35,658
Total travel and meetings	35,398	89	171	35,658
General				
Educational materials	3,686	9	18	3,713
	3,686 512	2	18 2	5,713 516
Office supplies Subscriptions and dues	172,492	433	833	173,758
Total general	176,690	444	853	177,987
Total administrative expenses	\$ 1,099,182	\$ 2,761	\$ 5,307	\$ 1,107,250
Total administrative expenses	<del>* 1,077,102</del>	* 4,, 01	** 3,507	* 1,101,20



# Schedule of Administrative Expenses

## **Pension Trust Funds** Year Ended June 30, 2002

	MSEP	ALJLAP	Judicial Plan	Total
D 1 1				
Personnel services	* 2 555 5 45	dh ( 100	# 40 005	* 0 554 000
Salaries	\$ 2,555,545	\$ 6,420	\$ 12,337	\$ 2,574,302
Employee fringe benefits	750,761	1,885	3,624	756,270
Total personnel services	3,306,306	8,305	15,961	3,330,572
Professional services				
Actuarial services	182,108	458	879	183,445
Attorney services	52,335	131	253	52,719
Auditing services	36,433	91	176	36,700
Banking services	17,536	44	85	17,665
Consulting services	54,300	136	262	54,698
Total professional services	342,712	860	1,655	345,227
Communications				
Postage and mailing	286,646	720	1,384	288,750
Telephone	101,975	256	492	102,723
Printing	225,635	567	1,089	227,291
Video production	993	2	5	1,000
Total communications	615,249	1,545	2,970	619,764
Building and grounds				
Depreciation	82,198	206	397	82,801
Utilities	45,139	113	218	45,470
Maintenance	53,608	135	258	54,001
Total building and grounds	180,945	454	873	182,272
Equipment				
Depreciation	335,977	844	1,622	338,443
Maintenance	190,077	477	918	191,472
Rental	78,572	197	379	79,148
Loss on sale of equipment	137	0	1	138
Total equipment	604,763	1,518	2,920	609,201
Travel and meetings				
Board travel and meetings	14,619	37	71	14,727
Staff travel and meetings	219,262	551	1,059	220,872
Vehicle maintenance and operation	3,753	9	18	3,780
Total travel and meetings	237,634	597	1,148	239,379
General				
Educational materials	26,310	66	127	26,503
	147,689	371	713	148,773
Office supplies				
Subscriptions and dues CURP program expenses	105,995 69,496	266 175	512 336	106,773
Insurance	75,879	173	366	70,007
Advertising		21	41	76,436
	8,425 4.549			8,487 4 582
Temporary help Miscellaneous	4,549 27,840	11 70	22	4,582
Miscellaneous Total general	<u>27,860</u>	1,171	2,251	28,064 469,625
Total general Total administrative expenses	\$ 5,753,812	\$ 14,450	\$ 27,778	\$ 5,796,040
Total administrative expenses	Ψ J,/JJ,012	\$ 14,43U	Ψ 41,//0	# J,770,040



# Schedule of Administrative Expenses

## **Internal Service Fund** Year Ended June 30, 2002

Personnel services	
Salaries	\$ 241,555
Employee fringe benefits	68,529
Total personnel services	310,084
-	
Professional services	
Attorney services	7,396
Auditing services	2,529
Banking services	700
Total professional services	10,625
Communications	
Postage and mailing	1,567
Telephone	7,785
Video production expense	69
Total communications	9,421
Building and grounds	
Building use charge	8,280
Utilities	3,482
Maintenance	3,958
Total building and grounds	15,720
Equipment	
Equipment use charge	34,112
Maintenance	14,777
Rental	5,738
Total equipment	54,627
Travel and meetings	
Board travel and meetings	1,015
Staff travel and meetings	20,093
Vehicle maintenance and operation	291
Total travel and meetings	21,399
General	
Educational materials	2,163
Office supplies	10,719
Subscriptions and dues	3,449
Insurance	5,266
Advertising	585
Temporary help	466
Miscellaneous	(5,292)
Total general	17,356
Total administrative expenses	\$ 439,232

# Schedule of Professional/Consultant Fees Year Ended June 30, 2002

			Internal Service Fund			
Professional/Consultant	Nature of Service	MSEP	ALJLAP	Judicial Plan	Total	Missouri State Insurance Plan
Gabriel, Roeder, Smith & Co.	Actuarial service	\$ 182,109	\$ 457	\$ 879	\$ 183,445	\$ 0
Thompson Coburn	Legal counsel	52,335	131	253	52,719	7,396
KPMG LLP	Financial audit	36,433	91	176	36,700	2,529
Jack Pierce	Governmental pension consulting	29,781	75	144	30,000	0
Central Bank	Banking services	17,536	44	85	17,665	700
Qflow Systems LLC	Image system upgrade conversion	6,835	17	33	6,885	0
Charlesworth & Associates	Risk management consulting	5,956	15	29	6,000	0
Malicoat-Winslow Engineers PC	Building air conditioner study	5,857	15	28	5,900	0
KPMG Taiwan	International tax reclaims consulting	3,921	10	19	3,950	0
Mass Strategic Communications Inc.	Phone billing errors	1,800	5	8	1,813	0
SONACOM IT Partners	Phone system consulting on					
	installation of T1 line	149	0	1	150	0
Total professional/consultant fees		\$ 342,712	\$ 860	\$ 1,655	\$ 345,227	\$ 10,625

See accompanying  $Independent\ Auditors'\ Report.$ 

Information on investment management and consulting fees can be found in the Schedule of Investment Expenses on page 42.





# **Investment Summary Pension Trust Funds** Year Ended June 30, 2002

	June 30	0, 2001			June 3	30, 2002	
Type of Investment	Cost Value	Fair value	Purchases and Capital Addition at Cost	Sales and s Redemptions at Cost	Cost Value	Fair Value	Percent of Total Fair Value
Fixed Income							
Treasury bonds, notes, and bills	\$ 682,944,719	\$ 755,537,384	\$ 656,525,410	\$ (671,124,598)	\$ 668,345,531	\$ 741,830,188	15%
Gov. bonds and govt.	222 5/4 502	222 224 447	1/2 207 010	(15( 100 005)	220 270 740	240 522 044	_
mortgage-backed securities Corporate bonds	332,561,583	338,206,647	462,207,910	(456,498,925) (720,961,995)	338,270,568	349,522,964	7 12
Convertible bonds	260,857,870 3,500,032	263,466,888 3,394,137	1,032,707,192 300,000	(3,650,032)	572,603,067 150,000	570,744,962 204,750	0
Collateralized	3,500,032	3,374,137	300,000	(3,030,032)	130,000	204,730	O
mortgage obligations	77,686,097	79,219,406	78,381,650	(50,143,230)	105,924,517	107,670,076	2
International corporate bonds	11,370,250	11,437,295	30,568,154	(3,569,140)	38,369,264	38,323,464	1
Total fixed income	1,368,920,551	1,451,261,757	2,260,690,316	(1,905,947,920)	1,723,662,947	1,808,296,404	37
	,						
Common stock	2,268,656,978	2,464,604,653	1,204,940,769	(1,708,656,306)	1,764,941,441	1,585,534,914	33
D C 1 . 1	0.217.774	7 772 ((2	2 002 005	(5.700.2(0)	( 122 200	4 700 577	0
Preferred stock	8,317,774	7,773,662	3,903,895	(5,798,369)	6,423,300	4,709,567	0
International Investments							
International equities	947,592,582	946,412,064	980,519,043	(1,046,350,318)	881,761,307	909,173,125	19
Foreign currency	15,192,156	13,395,649	14,914,887	(15,408,944)	14,698,099	19,428,087	0
EAFE index fund	386,341,377	321,460,716	0	0	386,341,377	294,028,371	6
Total international investments	1,349,126,115	1,281,268,429	995,433,930	(1,061,759,262)	1,282,800,783	1,222,629,583	25
Real Estate							
Equity holdings	5,658,746	5,658,746	0	0	5,658,746	5,658,746	0
REITs	148,783,250	159,514,405	605,136,739	(507,417,407)	246,502,582	254,553,971	5
Total real estate	154,441,996	165,173,151	605,136,739	(507,417,407)	252,161,328	260,212,717	5
Venture capital							
limited partnerships	0	147,094	0	0	0	114,882	0
Investments (per Statements							
of Plan Net Assets page 22)	5,149,463,414	5,370,228,746	5,070,105,649	(5,189,579,264)	5,029,989,799	4,881,498,067	100%
Short-term investments	04.045.500	04.045.500	2 5 44 24 4 455	(0.011.015.550)	202 07 4 702	202 04 4 40 4	
Short-term investment funds	86,865,798	86,865,798	2,541,314,457	(2,244,315,572)	383,864,683	383,864,684	
Repurchase agreements Total short-term investments	2,018,973 88,884,771	2,018,973 88,884,771	223,417,253 2,764,731,710	(223,151,824)	2,284,402 386,149,085	2,284,401 386,149,085	
Total short-term investments	00,004,//1	00,004,//1	2,/64,/31,/10	(2,467,467,396)	380,149,083	380,149,083	
Invested securities							
lending collateral							
Corporate bonds	538,796,424	538,782,350	190,298,588	(293,439,892)	435,655,120	434,349,750	
Short-term investment funds	638,219,997	638,219,997	47,284,586,962	(47,348,282,560)	574,524,399	574,524,400	
Total invested securities							
lending collateral	1,177,016,421	1,177,002,347	47,474,885,550	(47,641,722,452)	1,010,179,519	1,008,874,150	
75 . 11	# / 14 F O / 1 / C ·	** ***	#FF 200 F22 000	a/FF 200 T/0 112\	# ( 10 ( 010 100	*/ 07/ 504 600	
Total investments	\$6,415,364,606	\$6,636,115,864	\$55,309,722,909	\$(55,298,769,112)	\$6,426,318,403	\$6,276,521,302	

See accompanying Independent Auditors' Report.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS office.

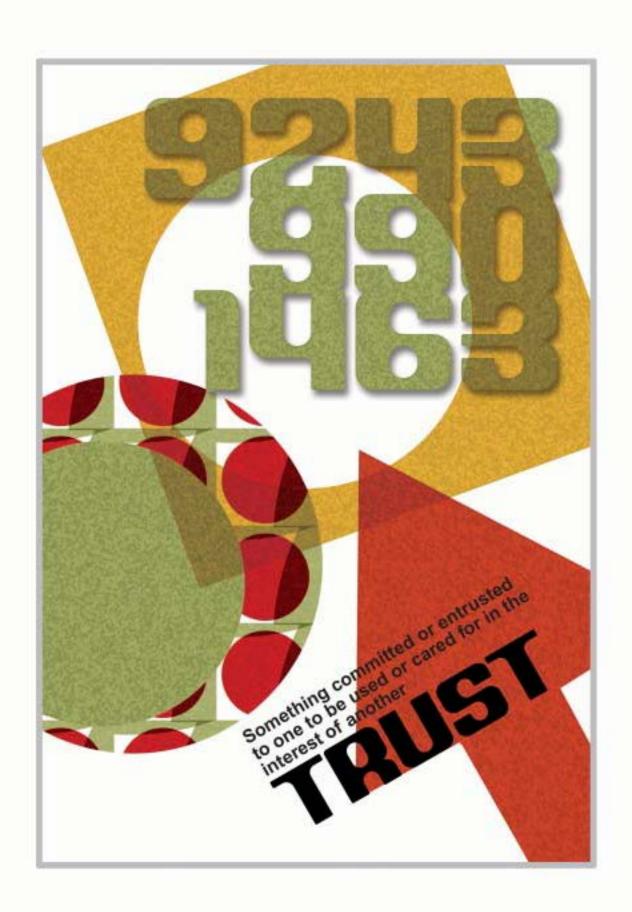


# **Investment Summary Internal Service Fund** Year Ended June 30, 2002

	June 3	0, 2001			June	30, 2002	
Type of Investment	Cost Value	Fair value	Purchases and Capital Additions at Cost	Sales and Redemptions at Cost	Cost Value	Fair Value	Percentage of Total Fair Value
Repurchase agreements	\$722,700	\$722,700	\$486,247,230	\$(485,363,774)	\$1,606,156	\$1,606,156	100%

See accompanying Independent Auditors' Report.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS office.



# Chief Investment Officer's Report



#### Dear Members:

It is a privilege to present this year's Investment Section of the MOSERS Comprehensive Annual Financial Report. The following are a few MOSERS investment facts:

- As of June 30, 2002, MOSERS was one of the 200 largest defined benefit plans in the United States with total assets of just over \$5 billion.
- While the fund generated a return of -6.2% net of expenses for the year, on a relative basis the fund had a very good year, outperforming the policy benchmark by 2.6% and outperforming the S&P 500 by about 12%.
- During the year, the fund spent approximately \$10.0 million for management of the assets, which was approximately \$9.0 million less than the median fund in our peer group.
- MOSERS' internal investment department manages approximately \$1.6 billion in assets or about 32% of the fund. All of these internally managed portfolios have met or exceeded expectations, with very low management costs.
- In the last two years MOSERS has been able to generate a return of 5.2% per annum in excess of the return of our policy benchmark. In real dollars these results have produced an extra \$600 million for the fund that would not have been achieved had the assets been invested passively in index funds.

While most of the above mentioned facts are positive, on an absolute basis the fund has produced results of approximately -4.2% per annum for the last two years and it has not been pleasant for any of the fiduciaries who are responsible for investing your money. Unfortunately, even with an extremely well diversified portfolio, losses on equities have been unavoidable given this bear market which, to date, has sent the S&P 500 down 18% during FY02 and down just over 30% over the last two years. (Please refer to our consultant's letter, immediately following my letter, for further information on just how bad the last two years have been for U.S. stocks.)

Given the tenacity of this bear market and its toll on our portfolio, I have developed a few questions that I would want answered if I were on the outside looking in, together with answers to those questions.

### Is the retirement benefit that I have been promised in jeopardy?

The quick answer is no. Let me explain why. MOSERS is structured as a "defined benefit" plan. Notice the words "defined benefit," which means that your benefit is defined by law and the state of Missouri is responsible for seeing that the benefit promised to you is honored. As part of this promise, the state of Missouri bears the investment risk associated with investment of the assets that have been placed in the "MOSERS Trust" for the benefit of all state employees. What this means is that if our performance over five-year rolling periods does not meet or exceed the 8.5% assumed rate of return, then it is likely that the state will need to contribute more money to MOSERS on behalf of all state employees, all else being equal. On the other hand, if our performance is well above the assumed rate, then the contribution rate will likely fall. The point is

"in no way will your promised retirement benefit be impacted by what is happening in the markets." Notice the distinct difference between what I just described and an investment you make on your behalf in a "defined contribution" plan such as an Individual Retirement Account (IRA) or the Missouri Deferred Compensation Plan. In a defined contribution plan, the individual participant bears the investment risk. Losses from any cause will directly affect the amount of money you have in your account for retirement.

If my MOSERS benefit is not impacted by the ups and downs of the financial markets, then why should I care how the pension fund performs?

I believe you might care for a couple of reasons. The first focuses on cause and effect. If MOSERS is able to achieve returns in excess of those being assumed, then, over time, the contribution rate that the state is required to make to fund promised benefits will fall. As this rate falls, money will be freed up in the state's budget to pay for other employee benefits, other goods and services, or to be returned to the taxpayer. The decision regarding what happens to these excess funds rests ultimately with the lawmakers. On the flip side, if MOSERS is unable to achieve returns in excess of those being assumed, then, over time, the contribution rate will gradually increase. The bottom line is how the fund performs over long periods of time will have an impact on the state contribution rate to fund the plan that, in turn, will likely affect other budgetary items, some of which can directly impact employees.

The second reason you might care is to gain additional knowledge regarding how to take advantage of some of the various investment strategies MOSERS utilizes in building a very well diversified portfolio. One way to stay abreast of what we are doing and thinking is to check out the Investment Section of the MOSERS web site at www.mosers.org. There you will find recent and longer-term

performance information about our fund, the various managers we employ with links to their web sites, and last but not least, our investment newsletters called Value Added. These newsletters are developed to keep our board informed of new strategies we are evaluating as well as other timely topics.

### How has the fund fared through this very difficult stretch for the equity markets?

We entered this bear market phase with roughly 75% of our portfolio in stocks. In hindsight, to state the obvious, we wish it had been lower. With that said, we have maintained a majority of the portfolio in stocks since the early 1990's and, without a doubt, the fund is much better off as the result of such significant commitments to the U.S. equity market, inclusive of the poor performance in the last two years. As I mentioned earlier, on a relative basis, our portfolio did extremely well in the last two years, outperforming our policy benchmark by over \$600 million.

Our ten-year total return through June 30, 2002, was 9% per annum, inclusive of the last two years. This exceeds the 8.5% rate that is being assumed in determining the state's contribution rate required to fund your benefits. MOSERS is focused on long-term results because many of the retirement promises that have been made will not be paid for 30 years or more. Because of our long-term focus, we do not need the majority of this money available immediately and can therefore assume more risk in an effort to achieve higher returns. While equity and equity-like investments are clearly more risky than investments in bonds, over long periods of time we believe that the fund will be compensated for accepting the additional risk.

In light of what has happened to the stock market in the last few years, what structural changes would you expect to see made in order to improve the investment results of the MOSERS' portfolio going forward?

The decade of the 1990's was all about playing "offense." In investment terminology, playing offense is all about concentration, momentum, greed, global harmony, and companies beating analysts' expectations every quarter, whatever the cost. In this environment, buying and holding the riskiest assets (equities) was the answer. It is obvious that the decade of the 2000's has started in a much different fashion. So far, this decade has been one of playing "defense." Playing defense is all about diversification, valuation, cynicism, fear, war, and corporate fraud. In my letter last year, I talked of a huge pendulum and how its height at one extreme would likely dictate its height on the opposite side. The 1990's positive side swing was an extreme and to date it seems as though the negative side swing will be equally extreme.

For well over a year, we have been working with the MOSERS board to identify asset classes and strategies that will likely contribute to our efforts to diversify the portfolio, some of which will be more effective in a decade where "defense" rules the day. This effort, culminating in an asset liability study that was conducted in the fourth quarter of FY02 and presented to the board in late June 2002, resulted in the addition of several new asset classes to the MOSERS' portfolio, including timberland, real estate, distressed debt and private equity. While the specifics of how all of these pieces will fit together remains to be determined, I can, at this time, provide you with some of the philosophies behind these decisions that will guide our program into the future.

- Diversification is critical because the future is unknown.
  - Spend more time thinking about what can go wrong than what can go right.
  - Forecasting short-term market direction has a high likelihood of failure.
  - A big dose of humility is critical to long-term success.
  - Establish reasonable expectations; return expectations that are too high will promote equally high risk taking.

- Cycles are real and almost every type of investment goes through them.
  - High returns attract capital investments, which generate competition, which leads to lower future returns.
  - Low returns dissuade capital investment, which leads to divestiture, bankruptcies, and less competition, and inevitably better future returns.
  - Picking exact tops and bottoms in these cycles is very difficult, however, picking entry and exit points that are near these tops and bottoms is achievable more times than not.
- While valuation will not matter during some shorter periods of time, over longer periods of time it is one of the most important drivers of investment returns.
  - Try to avoid the big losers by requiring a large "margin of safety" in the analysis of valuation.
  - Don't get great companies confused with great investments.
  - Do homework and be prepared to live through periods where things move in directions other than as expected – because they certainly will.
- Be a contrarian and a skeptic.
  - Once you have asked every question imaginable -- ask five more.
  - There are no "Holy Grails" or "Silver Bullets" in investing.
  - Following the herd is easy, but it usually leads to the slaughterhouse.
  - What the wise person does in the beginning for all the right reasons, the fool does in the end for all the wrong ones.

Until next year,

Rick Dahl

Chief Investment Officer

# Investment Consultant's Report



September 26, 2002

The Board of Trustees Missouri State Employees' Retirement System 907 Wildwood Drive Jefferson City, MO 65109

#### Dear Board Members:

The stock market, as represented by the S&P 500, has been down 10% or more in a calendar year, 12 times since World War II. Economic booms followed by busts followed by booms have been the pattern for as long as people have been recording these kinds of things. But the bear market of 2000-2002 is significant for at least a couple of reasons. First, as of the fiscal year ended June 30, 2002, it is both the longest and deepest bear market since the Great Depression of 1929-1932. The previous post-war bear market, that everyone in the investment business talked about, was 1973-1974, and, unfortunately, with the big market sell-off in June 2002 after the WorldCom fraud revelations, our current bear market has now exceeded 1973-74's decline.

I am struck as I write that last statement. We've now exceeded the decline of 1973-74! In 1973-74, we were extracting ourselves from a debt financed war that had proven to be very divisive for the country, the OPEC oil cartel was holding us hostage with high gasoline prices and long lines at service stations, inflation was heading toward double digits for the first time in 100 years, the Cold War was raging, and Nixon was being run out of office. I mean, there was some pretty ugly stuff going on. I can see why the market was off over 40%. And the market loss of 2000-2002 just exceeded that amount. The terrorist attack of last September and the fraud of Enron and WorldCom are major events, of course, but we

have "stability" in Washington, we are the world's only superpower, and inflation is a nonevent. Consumers are buying a little too much foreign-produced "stuff" and putting a little too much on their credit cards, but this is fixable, right? And yet we just exceeded the market decline of 1973-74.

When I talk to people who seem to have a pretty good handle on this kind of thing, they point to the fact that the market's decline is not based on a lot of things being wrong (although terrorist attacks and corporate misdeeds are certainly wrong and have definitely contributed to this decline) but rather that things were "too good" for "too long." In other words, the party went a little too long, the music was a little too loud, and the drinks flowed a little too easily. And now it's the next morning! This isn't a two aspirin and a cup of coffee deal. It is bigger than that.

With the benefit of hindsight, it's pretty obvious. We had companies going on buying sprees using their over-priced stock to pay too much for other companies. In the middle of all this were corporate boards and officers caught up in all of this and milking it all the way to the bank. We had Wall Street in greed heaven creating securities to fund all this activity and lying to the world about what great opportunities they had just created (for a handsome commission). Because the market kept going up, the idea that stocks were risky was forgotten and the belief that stocks could levitate above the gravity of economic reality

forever became accepted fact. And the idea that a company had to actually make something and sell it for a profit was replaced by a good story about how the Internet was going to change the world. In the middle of this, pension benefits were increased and/or contributions to pension funds were cut because the stock market would pay for it all. And as long as all was well, then we consumers thought, "Why not buy that 7th VCR for the house?" Now that I think about it, it really was a great party and I really miss it.

Look at the data. The four years ending in 1999 were the highest returning years for the S&P 500 in history. While earnings were OK, the truth is that this extraordinary period of market returns was almost entirely based on people being willing to pay ever increasing prices for the same company. Like tulips in Holland in the 1600's, the Internet and, in fact, the entire large cap U.S. stock market, proved to be nothing more than the Greater Fool Theory, in which the value of a company was based solely on what someone would pay for it tomorrow. Of course, what is so obvious after the fact is never clear as it is happening or it would not have happened. And so it was. Yet the reason capitalism works is it is a selfcorrecting system and what we have been experiencing recently is the latest version of this self-correction.

Stock prices are down. Merger activity is down. Poorly managed or fraudulently managed companies are disappearing. Wall Street has been discredited and fined. The "freebies" of the rising stock market, whether they were stock options for management or benefit increases or contribution holidays, will now be viewed as the real expenses that they are. Companies will have to prove they are profitable, well run, and prudent to regain investors' confidence. And folks who thought they would throw some money in the stock market and retire early are looking at a normal career again. And so it goes. Even the best parties must end.

MOSERS has been affected by the market's correction. In dollars and cents, the fund declined in value by \$380 million in the past fiscal year. It was a very volatile year as well.

The fund lost over \$500 million in the first quarter, recovered nearly all of this by the end of March and then lost nearly \$300 million in the quarter ending June 30, 2002. This is a decline of 6.2% for the year. Obviously, years like this one and the last have brought down longer-term results. For three and five years the returns have been -0.2% and 5.2% annualized, respectively. Longer-term results, which include the poor recent years, are still strong and above the actuarial assumptions. All returns are calculated in accordance with the Association for Investment Management Research performance presentation standards. On a relative basis, the fund has held up well. In all periods, the total fund has outperformed its benchmarks, which means that the actual results have exceeded the returns of the markets. In a world where no one can control markets, the efforts of staff, the investment managers, and ourselves become focused on adding value above the benchmarks. In that regard, these efforts have been quite successful.

The negative total fund returns of the last three years obviously will impact funding levels and required contributions going forward, but as a member this is not your concern as your benefits are guaranteed. It does create an issue for the state, as it could require an increase in annual contributions. Our collective focus is to earn the highest return possible within an acceptable level of risk. In markets such as this, the return portion is a challenge and the risk element is ever-present. We all foresee a market place driven far more by reality than the "party" that was the 18-year bull market that ended in early 2000. This means working harder for what should be less reward. It also means that this kind of attention and focus are more important than they've been in a long, long time. So it goes.

All of us at Summit appreciate the opportunity to be of continued service to the board and the system.

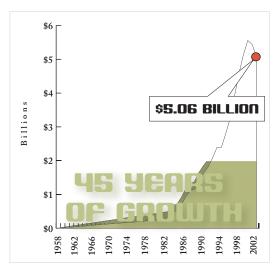
Sincerely,

Stephen P. Holmes, CFA

President

### **Total Fund Review**

#### Value of the Fund



#### Fiduciary Responsibility

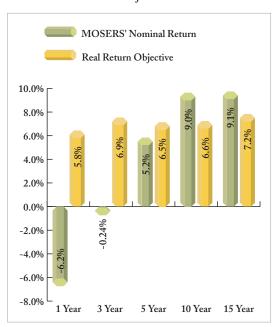
The MOSERS Board of Trustees bears the ultimate fiduciary responsibility for the investment of system assets. Members of the board must adhere to state law and prudent standards of diligence with respect to their duties as investment fiduciaries. Accordingly, they are required to discharge their duties in the interest of plan participants. They must also act with the same care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims.<sup>1</sup>

#### Overall Investment Objective

The board's overall objectives with respect to the investment of the MOSERS' assets are to:

- Develop a Real Return Objective<sup>2</sup> (RRO) that will:
  - Keep contribution rates reasonably level over long periods of time.
  - Maintain contribution rates consistent with historical levels ranging from 10% to 12% of covered payroll.
  - Provide the state of Missouri with the option to reduce the unfunded liability ahead of schedule, ultimately reducing the state's contributions for retirement benefits and producing savings which could be allocated to wages and other benefits for state employees.
- Establish an asset allocation policy that is expected to meet the RRO with the least amount of short-term volatility.
- Minimize costs associated with the efficient implementation of the asset allocation through the use of internal and external resources.

#### Return vs. Real Return Objective 4



### Real Return Objective (RRO)

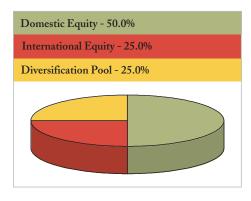
The MOSERS' actuarial funding objective is to produce nominal returns that exceed the rate of inflation by 5% per year. The best known measure of inflation is the Consumer Price Index (CPI). From the graph on the left, one can see the MOSERS' investment returns have exceeded the RRO over long time periods since the mid 1980s.<sup>3</sup>

- 1 Section 105.688, RSMo Investment Fiduciaries, Duties.
- 2 The real return objective is the rate by which the total return exceeds the inflation rate as measured by the CPI, U.S. city Average for all Urban Consumers (CPI-U).
- 3 Performance returns were calculated using a time-weighted rate of return based on market values.
- 4 CPI Source: United States Department of Labor, Bureau of Labor Statistics (not seasonally adjusted). MOSERS' real return is the excess return over the CPI utilizing the formula: Real = (1 + Nominal)/(1 + CPI) - 1.

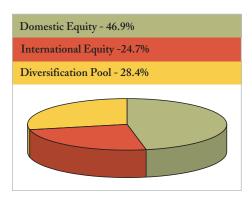
#### Market Value

As of June 30, 2002, the MOSERS' investment portfolio had a market value of \$5.06 billion.

#### Policy Asset Allocation



#### **Actual Asset Allocation**



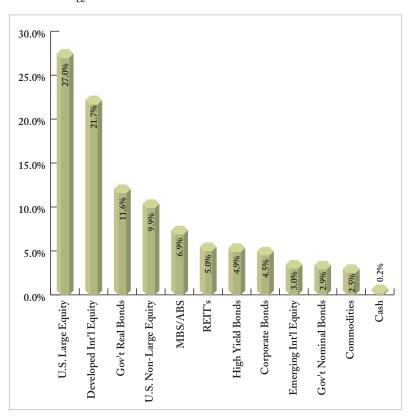
#### Summary of Policy Asset Allocation

MOSERS' assets are divided into three broad asset classes: domestic and international equities, and a diversification pool consisting of assets with low absolute volatility and/or whose price movements historically have had very little or no relationship to the price movements of equities. The assets that currently make up this pool are intermediate, high quality nominal bonds, real bonds, commodities, and cash.

The resulting portfolio is intended to produce the required real rate of return necessary to fund the pension liabilities within prudent levels of risk. (Real return is the amount by which actual return exceeds the rate of inflation.) The pie chart above depicts the MOSERS' current policy asset allocation, adopted by the board in March 2000.

Due to the fact that different asset classes seldom move in lock step with each other, it is reasonable to expect that over time the actual allocation will differ from the policy mix. The pie chart to the left depicts the MOSERS' actual asset mix as of June 30, 2002.

#### **Actual Strategy Allocation**



#### Strategy Asset Allocation

Strategic biases within asset classes are employed in an effort to further diversify the overall portfolio and enhance long-term returns within each asset class. A strategic decision should be thought of as any decision that might cause MOSERS' actual portfolio to differ from the policy mix benchmarks. The graph to the left depicts MOSERS' actual strategy mix as of June 30, 2002.

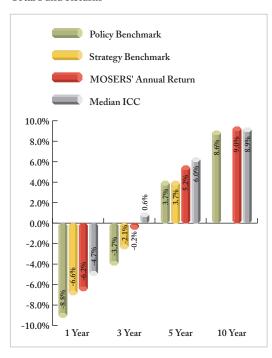


#### Total Fund Return and Benchmark Comparisons

In addition to comparing the actual returns of the fund to the Real Return Objective, the board also compares fund returns to the following three benchmarks: the MOSERS' Policy Benchmark, the MOSERS' Strategy Benchmark and, to a lessor extent, the median return generated by a peer group of public pension funds.

- The policy benchmark provides an indication of the returns that could be achieved (excluding transaction costs) by a portfolio invested passively in the broad market with percentage weights allocated to each asset class in MOSERS' policy asset allocation.
- The strategy benchmark reflects decisions made by the board to strategically deviate from the broad asset classes. The strategy benchmark is more narrowly defined and focuses on any specific "bets" made relative to the policy benchmark. Examples of strategic decisions in the MOSERS' portfolio would be the overweight to small capitalization and value stocks in the domestic equity portfolio.
- The Independent Consultants Cooperative (ICC) median public fund return reflects a universe of public pension plans with assets in excess of \$1 billion.<sup>5</sup>

#### **Total Fund Returns**



By comparing the strategy benchmark with the policy benchmark, the board will, over time, be able to judge the success or failure of all decisions made to deviate from the policy allocation. Value is being created from the strategy decision if the strategy return exceeds the policy return.

Similarly, by comparing the actual return to the strategy benchmark, the board will, over time, be able to judge the success or failure of the staff and consultant in implementing the board's strategy. Returns attributed to implementation may take on several forms including active manager selection, the effects of the rebalancing policy, and in general the staff effect. Value is being added from implementation if the actual return exceeds the strategy return.

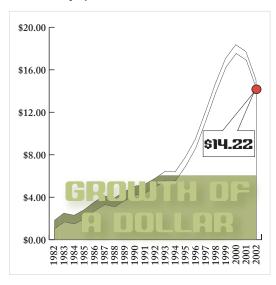
The graph to the left shows total fund return comparisons for 1-, 3-, 5-, and 10-year periods. Strategy benchmarks were not clearly defined prior to 1995, which was when MOSERS formally adopted strategic biases.

<sup>5</sup> The UCC is a cooperative of 13 independent investment consultants from across the United States and one major custodial bank that collectively provide performance data in order to create a universe for peer returns. The observed median return is gross of investment management fees and reflects 33 participating funds.

# **Domestic Equity Review**



#### **Domestic Equity**



#### Market Value

As of June 30, 2002, the MOSERS' Domestic Equity Portfolio had a market value of \$2.37 billion, representing 46.9% of MOSERS' total assets.

#### Summary of Domestic Equity Investments

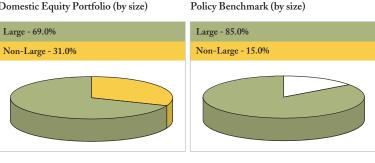
MOSERS maintains a significant allocation to publicly held shares of corporations domiciled in the United States. Domestic equities are held in broadly diversified portfolios, and they represent 50% of the MOSERS' policy asset allocation. Equity investments are expected to contribute significantly to the fund's achievement of a longterm real rate of return in excess of the 5% real return objective set by the board, because of their historic return premiums over inflation. The graph

to the left depicts the performance of the domestic equity portfolio since 1982 by showing how a \$1.00 investment in the portfolio had grown to \$14.22 by June 30, 2002.

#### Domestic Equity Portfolio Structure

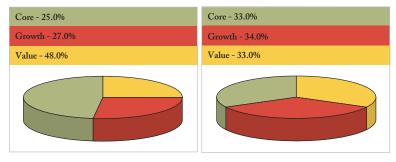
The Domestic Equity Portfolio consists of eleven separate portfolios: one passive, three enhanced and seven active. The passive and enhanced portfolios provide broad market diversification and make up 55.3% of the total domestic equity. The passive and enhanced allocations provide low cost exposure to the equity market. One of the enhanced portfolios provides the total portfolio with its strategic overweight to small capitalization and value stocks relative to the broad U.S. equity market. The active portfolios are managed in a concentrated manner containing only a manager's best investment ideas. The composite of the active managers represents 44.7% of the domestic allocation.





Policy Benchmark (by style)

Domestic Equity Portfolio (by style)



The pie charts to the left compare the MOSERS' Domestic Equity Portfolio to the Policy Benchmark (the Russell 3000), first by market capitalization (size), then by style. As observed, there is a strategic bias toward non-large and value investment styles, which has been established relative to the Policy Benchmark.



#### **Domestic Equity Portfolio Statistics**

The following table displays the statistical characteristics of the MOSERS' Domestic Equity Portfolio as of June 30, 2002, with comparisons shown to the portfolio's policy benchmark and to the same portfolio as of the end of the prior fiscal year.

Characteristics	June 30, 2002 MOSERS U.S. Stocks	June 30, 2002 Russell 3000	June 30,2001 MOSERS U.S. Stocks
Number of securities	1,238	3,000	1,198
Avg. market capitalization	\$48.8 billion	\$70.3 billion	\$67.2 billion
Portfolio yield	2.12%	1.59%	1.50%
Portfolio P/E	19.8x	26.0x	19.7x
Portfolio beta vs. S&P 500	0.83	0.89	0.99
Price/book ratio	1.8x	3.0x	2.7x

The following table displays MOSERS' ten largest domestic equity holdings as of June 30, 2002, and the ten largest holdings one year prior.

Ten Largest Holdings June 30, 2002 <sup>6</sup>	Market Value	% of Total MOSERS U.S. Stocks	Ten Largest Holdings June 30, 2001	Market Value	% of Total MOSERS U.S. Stocks
General Electric	\$33,354,920	1.4%	Microsoft	\$57,671,460	2.1%
Microsoft	31,170,029	1.3	General Electric	56,860,538	2.1
Pfizer	30,921,240	1.3	Pfizer	47,289,919	1.7
Citigroup	23,022,615	1.0	Citigroup	38,646,331	1.4
Exxon Mobil	19,728,760	0.8	Exxon Mobil	36,601,484	1.3
American Intl. Group	19,528,040	0.8	Intel	30,974,580	1.1
Cisco Systems	18,643,226	0.8	American Intl. Group	29,513,262	1.1
Wal-Mart Stores	16,580,014	0.7	Cisco Systems	29,112,502	1.1
Washington Mutual	14,853,834	0.6	IBM	27,596,860	1.0
AOL Time Warner	14,357,284	0.6	AOL Time Warner	26,699,810	1.0

<sup>6</sup> A complete list of holdings is available upon request.



#### Domestic Equity Portfolio Investment Advisors

As of June 30, 2002, MOSERS had contracts with 9 external investment advisors targeted to manage 69.3% of the domestic equity portfolio; the remaining 30.7% of the domestic equity portfolio is managed internally by MOSERS' staff.

The table below displays the external firms that were under contract with MOSERS during FY02 for management of domestic equity securities. In addition, it shows all internally managed domestic equity portfolios, the managers' investment styles, FY02 ending portfolio market values, and the managerial fees paid for the fiscal year.

During FY02, MOSERS hired one new enhanced investment advisor and three new active advisors while terminating one active advisor.

Investment Advisor	Investment Style	Portfolio Market Value as of June 30, 2002	FY02 Management Fee
Internal Staff	Passive		
	S&P 500 Index	\$ 472,453,457	
	Active		
	REIT Portfolio	\$ 254,099,153	\$ 152,080
BlackRock	High Yield Bond	247,462,588	381,237
NISA	BBB Bond	49,621,605	
Dimensional Fund Advisors	Passive		
	Non-Large Value	500,461,109	584,233
OakBrook	Enhanced		
	S&P 500 Index	167,014,312	250,000
Oak Associates	Active		
	All-Cap Growth	125,538,683	1,296,897
Legg Mason Capital Management	Active		
	All-Cap	130,488,292	636,472
Zak Capital, Inc.	Active		
	All-Cap Growth	0	231,317
Capital Guardian Trust Company	Active		
	All-Cap Core	122,469,873	418,491
AmeriCap Advisers	Active		
	All-Cap Core	129,841,342	393,604
Advanced Investment Management	Enhanced		
	S&P 500 Index	168,817,748	187,500
Total		\$ 2,368,268,1627	\$ 4,531,831

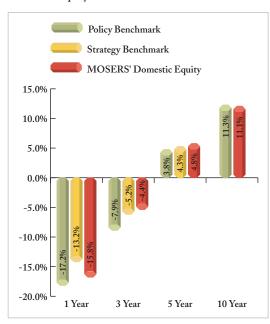
<sup>7</sup> Does not include NISA rebalancing.



#### Domestic Equity Investment Returns

MOSERS' Policy Benchmark, the Russell 3000 Index, lost 17.2% for the year. The strategy to intentionally diversify holdings, particularly with smaller capitalization and relatively less

#### **Domestic Equity Returns**



expensive stocks, added value in FY02. This can be observed by comparing the -17.2% return generated by the policy benchmark to the -13.2% return generated by the strategy benchmark. The MOSERS' actual return of -15.8% was below the strategy benchmark and reflects the negative results of the manager mix.

The graph to the left shows 1-, 3-, and 5-year results as described above and also includes the actual return compared with the policy benchmark for the 10-year period. The strategy benchmark was not clearly defined before 1995, which was when MOSERS formally adopted strategic biases.



#### **Brokerage Commissions**

In the fiscal year ended June 30, 2002, MOSERS generated the following commissions through the purchase and sale of domestic equity securities.

			Commission	
Brokerage Firms	Shares Traded	Dollar Volume of Trades	Dollar Amount	Value Po Share
U.S. Clearing	30,241,000	\$ 755,292,427	\$ 941,722	\$0.031
Guzman & Company	14,019,969	419,967,281	153,101	0.013
Instinet Corporation	13,191,159	337,911,310	364,537	0.028
State Street	8,235,686	164,494,966	102,946	0.012
Jefferies & Company	4,428,569	138,069,508	152,170	0.034
Montgomery Secs	7,120,200	133,604,468	211,665	0.030
Investment Technology Group	4,219,399	55,060,248	80,867	0.019
Lehman Brothers	2,309,300	51,803,220	70,948	0.03
Salomon Smith Barney	2,663,700	48,664,767	90,898	0.03
Merrill Lynch	1,800,169	44,423,601	86,581	0.04
Cantor Fitzgerald	1,016,450	39,389,155	36,514	0.03
Bear Stearns	3,016,532	35,593,185	90,805	0.03
B Trade Services LLC	1,246,610	35,210,774	36,808	0.03
Lynch Jones & Ryan	1,805,100	33,236,542	39,210	0.02
Bridge Trading Company	1,011,241	29,858,172	57,706	0.05
Warburg Dillion Read	1,222,010	28,960,178	59,519	0.04
CS First Boston	840,800	21,314,785	42,920	0.05
Others (including 45 brokerage firms)	7,146,224	163,041,219	360,589	0.050
Totals	105,534,118	\$2,535,895,806	\$2,979,506	\$0.02
Zero commission trades				
excluded from above	17,252,240	\$ 366,467,373		

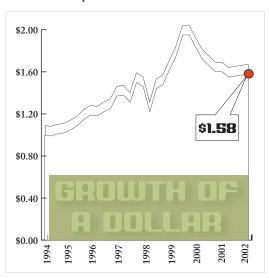
#### Soft Dollar Expenditures

In the fiscal year ended June 30, 2002, MOSERS' domestic equity managers declared \$402,734 of the commissions generated were utilized to acquire a variety of services and research information. These expenditures, referred to as soft dollars (expendable excess commissions), are permitted under current SEC investment advisor guidelines, and represent 13.5% of MOSERS' agency commissions.

Type of Service Acquired	Commissions Used	Percentage of Tota
Trading and analytic systems	\$226,331	56.2%
Research services	97,891	24.3
Consulting/benchmarks	11,002	2.7
Portfolio management systems	19,948	5.0
Exchange fees, other services	7,606	1.9
Pricing services	18,574	4.6
Market research	9,834	2.4
Transaction cost analysis	9,377	2.3
Proxy Services	2,171	0.6
Total	\$402,734	100.0%

# International Equity Review

#### International Equities



#### Market Value

As of June 30, 2002, the MOSERS' International Portfolio had a market value of \$1.25 billion, representing 24.7% of the total fund.

#### Summary of International Equity Investments

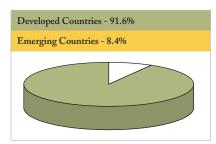
International stocks, with a target allocation of 25.0%, are employed by the fund primarily because their historical return premiums versus inflation, if realized in the future, will help preserve and enhance the fund's ability to achieve a long-term real rate of return in excess of the 5% real return objective set by the board. International stocks are also attractive for the diversification benefits they provide to the portfolio. By incorporating these stocks into the asset mix, MOSERS expects to achieve overall equity returns which are comparable to that of a

domestic stock portfolio while reducing overall portfolio volatility. The graph above depicts the performance of the international equity portfolio since 1994, by showing how a \$1.00 investment in the portfolio had grown to \$1.58 by June 30, 2002.

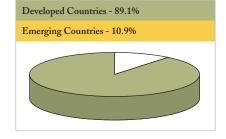
#### International Equity Portfolio Structure

As of June 30, 2002, 36% of the international portfolio was managed in an enhanced index fashion with the balance of 64% being managed actively. International stock investments consist of a Morgan Stanley Capital International Europe, Australia, and Far East (MSCI EAFE) Enhanced Index Portfolio, a Morgan Stanley Capital International Emerging Markets Free

Policy Benchmark



Actual Portfolio



(MSCI EMF) Enhanced Index Portfolio and two active portfolios. In July 1995, the board hired an active developed market manager with a value tilt to complement the EAFE Index Portfolio. In May of 2000, a second active developed markets manager was hired with a growth tilt. The MOSERS' policy allows the active managers to hedge currency up to 25%, while the enhanced portfolios are unhedged.

The pie charts to the left show the breakdown of investments in developed markets and emerging markets in the international portfolio compared to the policy and strategy benchmark, Morgan Stanley Capital International EAFE + EMF Index.



## International Equity Portfolio Statistics

The following table displays the statistical characteristics of the MOSERS' International Stock Portfolio as of June 30, 2002, with comparisons shown to the portfolio's policy benchmark and to the same portfolio as of the end of the prior fiscal year.

Characteristics	June 30, 2002 MOSERS International Equity	June 30, 2002 MSCI EAFE & EMF	June 30, 2001 MOSERS International Equity
Number of securities	1,434	1,719	1,379
Avg. market capitalization	\$22.0 billion	\$35.2 billion	\$5.2 billion
Portfolio yield	2.20%	2.30%	2.53%
Portfolio P/E	22.4x	28.8x	16.2x
Price/book ratio	1.8x	1.9x	1.4x

The following table displays MOSERS' ten largest holdings in International Equity as of June 30, 2002, as well as the ten largest holdings at the end of the prior fiscal year.

Ten Largest Holdings June 30, 2002 <sup>8</sup>	Market Value	% of International Stocks	Ten Largest Holdings June 30, 2001	Market In Value	% of nternational Stocks
Talisman Energy (Canada)	\$21,459,103	3 1.7%	Diageo (UK)	\$19,330,770	) 1.6%
Novartis (Switzerland)	15,300,505		Hong Kong Elec. (Hong Kong)	19,036,698	
Hong Kong Elec. (Hong Kong)	14,746,998	3 1.2	Ahold (Netherlands)	18,041,542	2 1.4
Allied Domecq (UK)	13,756,036	5 1.1	Talisman Energy (Canada)	16,827,260	1.4
Boots Co. (UK)	13,595,823	1.1	Takefuji (Japan)	14,739,866	5 1.2
Nestle (Switzerland)	13,021,828	3 1.0	Elan Corp. (Ireland)	14,446,284	1.2
Diageo (UK)	12,395,038	3 1.0	Unilever (UK)	14,355,667	7 1.2
Aventis (France)	12,370,82	4 1.0	Boots Co. (UK)	14,229,097	7 1.1
Centrica (UK)	11,871,443	3 1.0	Pernod-Richard (France)	13,264,304	1.1
Renault (France)	11,452,224	4 0.9	Parmalt Finanz (Italy)	12,351,045	5 1.0

<sup>8</sup> A complete list of holdings available upon request.



#### International Equity Portfolio Investment Advisors

As of June 30, 2002, MOSERS had contracts with three external investment advisors for the management of four international stock portfolios. Two firms are managing active portfolios in the developed markets that are expected to add incremental return over an established benchmark through stock selection, country selection, and small amounts of currency hedging. The third manager has two enhanced index portfolios that are expected to add a small amount of return while matching country weights with the index. One enhanced portfolio is for the developed markets and the other is for the emerging markets.

The following table displays the external firms that were under contract with MOSERS during FY02 for management of international stocks. Also displayed are the managers' investment styles, FY02 ending portfolio market values and the managerial fees paid for the fiscal year.

Investment Advisor	Investment Style	Portfolio Market Value as of June 30, 2002	FY02 Management Fee
Silchester International Investors	Active value		
	Developed markets	\$398,377,358	\$1,654,117
Mastholm Asset Management	Active growth		
	Developed markets	401,272,422	1,549,623
Merrill Lynch Quantitative Advisors	Enhanced		
	Developed markets	294,028,371	431,830
Merrill Lynch Quantitative Advisors	Enhanced		
	Emerging markets	153,223,545	160,650
Total		\$1,246,901,6969	\$3,796,220

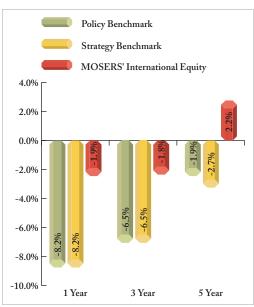
 $<sup>9\,</sup>$  This total excludes the impact of the rebalancing account on the total international portfolio.



#### **International Equity Investment Returns**

The MOSERS' Policy Benchmark, the MSCI EAFE + EMF Index lost 8.2% for the year. As of June 30, 2002, there were no strategic "bets" in place in the international portfolio, therefore the strategy benchmark and the policy benchmark are the same. MOSERS' actual return of -1.9%

#### International Equity Returns

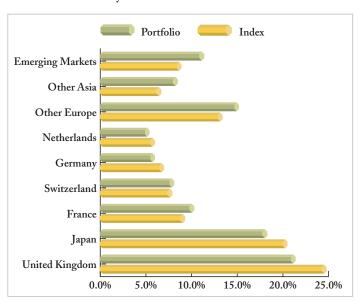


added significant value relative to both benchmarks. A large part of the out-performance was due to the value manager's 14.8% return which exceeded the benchmark by over 20% for the year. The two enhanced portfolios also added to the positive performance relative to the benchmark.

The graph to the left shows 1-, 3-, and 5-year results as described above. MOSERS' first allocation to international stocks did not occur until July 1994; therefore, 10-year returns are not applicable.

The chart below displays the MOSERS' country exposure relative to the policy benchmark on June 30, 2002.

#### **International Country Allocation**





### **Brokerage Commissions**

In FY02, MOSERS generated the following commissions through the purchase and sale of international equity securities.

		Dollar Volume of Trades	Commission	
Brokerage Firm	Shares Traded		Dollar Amount	Basis Points
M C	17 212 027	# 10F 027 202	# 402.254	21.00
Morgan Stanley	17,313,827	\$ 185,027,392	\$ 403,354	21.80 22.10
Merrill Lynch CS First Boston	22,974,954	184,637,813	408,057	24.62
Deutsche Bank	13,993,182 9,165,420	136,270,108	335,437 302,708	23.75
Goldman Sachs	12,114,689	127,482,540 120,056,970	,	23.73
	9,607,259	103,064,487	275,694	24.46
Warburg Dillion Read BNP Securities	7,306,108	103,064,487	252,141 289,764	28.48
	17,371,239	94,726,146	255,575	26.48
Credit Lyonnais Nomura	5,865,994	93,810,898	186,316	19.86
Societe Generale	, ,	, ,	197,994	
ABN Amro	5,624,022	80,596,293	,	24.57 19.20
Dresdner Kleinwort B	5,703,459	52,575,759	100,956	
Instinet	3,429,453	39,799,518	91,236	22.92
	5,422,681	33,151,853	36,528	11.02
Chevereux De Virieu	792,400	31,736,723	79,342	25.00
Enskilda Securities	2,023,200	26,055,708	65,139	25.00
Lehman Brothers	2,079,150	25,671,771	55,617	21.66
Nesbitt Burns	1,402,800	23,402,385	45,794	19.57
Oppenheim Sal Jr.	374,985	22,184,060	141,413	63.75
Kleinwort Benson	1,514,320	20,131,754	43,432	21.57
Jardine Fleming	11,951,314	18,352,820	50,016	27.25
Others (Including 39 brokerage firms)	120,067,175	225,457,736	571,801	25.36
Totals	276,097,631	\$1,745,950,476	\$4,188,314	23.99
Zero commission trades excluded from above	18,960,308	\$ 40,260,679		

### Soft Dollar Service Expenditures

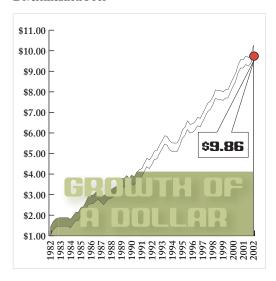
For the fiscal year ended June 30, 2002, MOSERS' current international equity managers declared that \$20,385 of the commissions generated were utilized to acquire a broad variety of services and research information. Soft dollars represented less than 1% of the total agency commissions.

Type of Service Acquired	Commissions Used	Percentage of Total	
Trading and analytic systems	\$20,385	100.0%	
Total	\$20,385	100.0%	

#### **Diversification Pool Review**



#### Diversification Pool<sup>10</sup>



#### Market Value

As of June 30, 2002, the MOSERS' Diversification Pool had a market value of \$1.4 billion, representing 28.5% of the total fund.

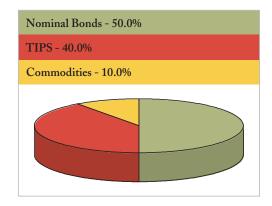
#### Summary of the Diversification Pool Investments

The Diversification Pool, with a target allocation of 25%, serves to offset or dampen the equity risk component within the fund. The pool is primarily comprised of nominal bonds or traditional fixed income instruments, real return bonds or TIPS<sup>11</sup>, and a commodities exposure. Targets for these classes are 50%, 40% and 10% respectively within the pool (see below). All three of these security classes have exhibited consistently low and, at times, even negative correlations to equities over long periods of time, a factor which provides excellent diversification properties to the fund's

75% allocation to equities. Residual cash amounts are not significant and have no target allocation.

The nominal bond portion of the pool has been structured with an intermediate maturity profile and a significant bias towards high credit quality and good liquidity. The nominal bonds provide sufficient and predictable cash flow, and are structured in such a way as to perform well in periods of a stable, low inflationary environment and in a disinflationary or deflationary trend. TIPS will perform well in periods of rising inflation when nominal bonds will not be performing as well. Finally, commodities exposure protects the fund in those situations when inflation is unanticipated and is rising rapidly. Commodities

#### **Diversification Pool Portfolio Targets**



exposure is somewhat unique in that it tends to be a very good diversifier to both stocks and nominal bonds. That is, in periods of inflation surprises, both stocks and nominal bonds are likely to do poorly and commodities will act as a buffer to their fall. Conversely, commodities are likely to lag in periods of disinflation when stocks and nominal bonds tend to perform well. In short, the primary function of the Diversification Pool is to diversify away a portion of the equity risk in the overall fund, yet there are also diversification elements within the pool itself that should provide steady performance in most investment scenarios.

<sup>10</sup> The area graph above depicts the performance of the diversification pool since 1982 (all fixed income prior to the 4th quarter of 1998, followed by a blend of fixed income, TIPS, and commodities to the present) by showing how a \$1.00 investment in the portfolio had grown to \$9.86 by June 30, 2002.

<sup>11 &</sup>quot;TIPS" is an acronym for Treasury Inflation Protected Securities. These securities are a "full faith and credit" guarantee of the U.S. Government. They pay lower rates of interest, but the bondholder is protected against inflation for the life of the bond by means of a mechanism that adjusts the maturing principal amount of the bond higher, according to changes in the CPI.

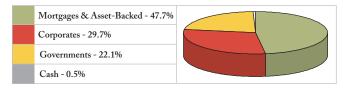


#### Diversification Pool Portfolio Structure

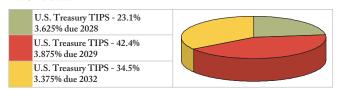
As of June 30, 2002, 56.1% of the diversification portfolio by market value was passively managed. Another 32.9% was managed in an enhanced index style, which allows for some limited trading flexibility with the expectation of capturing additional return relative to the benchmark. A 9.8% portion was managed in an active duration management style, and other assets comprised 1.2%.

A significant expansion of the Diversification Pool was implemented in the second quarter of FY00. Because of the diversification properties of both fixed income and commodities, a plan was put into place to essentially merge the two asset classes into one pool. The major changes to the pool included an increase in the TIPS allocation from 2.5% to 10% and a substantial reduction in the maturity profile of the nominal bond component, while simultaneously increasing the portfolio's credit quality. Nominal bonds were also significantly reduced as a percentage of the overall fund. Given the acceptance of more equity risk in the fund, it was deemed appropriate and prudent to reduce risk in the nominal bond component of the Diversification Pool. With each separately managed portfolio being confined to one specific fixed income sector, MOSERS is able

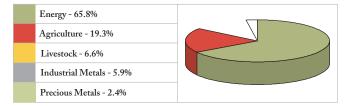
#### Nominal Bonds Portfolio



#### **TIPS Portfolio**



#### Commodities Portfolio



to capitalize on each manager's area of expertise. Duration of the nominal bond portfolio can fluctuate from approximately 2.5 years to approximately 3.9 years, where it stands as of June 30, 2002, depending upon the portfolio profile of the active duration manager. The commodity allocation continues to be managed with the same target weighting and management style as in the prior fiscal

The pie charts to the left show the composition or sector exposures of the security classes (nominal bonds, TIPS and commodities) within MOSERS' Diversification Pool as of June 30, 2002.



#### **Diversification Pool Portfolio Statistics**

The following table displays the statistical characteristics of the MOSERS' Diversification Pool Portfolio as of June 30, 2002, with comparisons shown to the portfolio's policy benchmark and to the portfolio as of the end of the prior fiscal year.

June 30, 2002 MOSERS Diversification Pool	June 30, 2002 Policy Benchmark <sup>12</sup>	June 30,2001 MOSERS Diversification Pool
250	1,542	164
4.3%	4.6%	5.0%
4.1%	4.5%	6.0%
14.8 years	14.9 years	15.1 years
5.8	5.7	5.6
AAA+	AAA+	AAA+
	MOSERS Diversification Pool  250 4.3% 4.1% 14.8 years 5.8	MOSERS June 30, 2002 Policy Benchmark <sup>12</sup> 250 4.3% 4.6% 4.1% 4.5% 14.8 years 5.8 5.7

The following table displays MOSERS' ten largest holdings in the Diversification Pool as of June 30, 2002, as well as the ten largest holdings at the end of the prior fiscal year.

Ten Largest Holdings June 30, 2002 <sup>13</sup>	Market Value	% of Total MOSERS Div. Pool	Ten Largest Holdings June 30, 2001	Market Value	% of Total MOSERS Div. Pool
U.S. TIPS			U.S. TIPS		
3.875% 4/15/29	\$246,212,811	17.2%	3.875% 4/15/29	\$362,977,886	24.6%
U.S. TIPS			U.S. TIPS		
3.375% 4/15/32	200,481,492	14.0	3.625% 4/15/28	236,945,345	16.0
U.S. TIPS			USTN		
3.625% 4/15/28	134,044,871	9.3	5.875% 11/30/01	72,714,593	4.9
USTN			USTB		
3.875% 6/30/03	71,077,343	5.0	5.375% 2/15/31	26,291,064	1.8
USTB			USTB		
5.375% 2/15/31	30,899,286	2.2	6.375% 8/15/27	19,563,983	1.3
USTB			USTB		
6.375% 8/15/27	20,071,824	1.4	6.00% 2/15/26	15,690,375	1.1
IBRD			IBRD		
4.75% 4/30/04	15,477,857	1.1	4.75% 4/30/04	14,884,375	1.0
USTB			MERRILL LYNCH		
6.125% 8/15/29	10,772,785	.8	6.15% 1/26/06	12,024,533	.8
FNMA			ASSOCIATES CORP.		
7% 5/1/32, pool #0635239	10,370,105	.7	5.80% 4/20/04	11,093,075	.8
GNMA			USTB		
5.50% 3/15/14, pool #0780988	8,432,654	.6	6.125% 8/15/29	10,520,679	.7

Key to holdings:

FNMA=Federal National Mortgage Association

GNMA=Government National Mortgage Association

IBRD=International Bank for Reconstruction & Development

USTB=U.S. Treasury Bond

USTN=U.S. Treasury Note

U.S. TIPS=U.S. Treasury Inflation Protected Securities

<sup>12</sup> The policy benchmark, as of the end of the fiscal year, is a composite of 40% of the TIPS portfolio return, 16% Lehman Mortgage Index, 8% Lehman Asset-backed Index, 16% Lehman Credit Index (AAA/AA segment only), 10% Lehman Intermediate Treasury, 10% Goldman Sachs Commodity Index less 50 basis points. In order to derive benchmark characteristics, the Commodity Index is excluded because of its smaller contribution to the benchmark and its lack of comparability in terms of the portfolio characteristics being reported.

<sup>13</sup> A complete list of holdings is available upon request.

#### **INVESTMENT SECTION**



#### Diversification Pool Portfolio Investment Advisors

As of June 30, 2002, MOSERS had contracts with three external investment advisors designated to manage 44% of the Diversification Pool. Internal management of 56% of the Diversification Pool, which includes cash reserves and miscellaneous, enables passive participation in a very significant segment of the Diversification Pool assets at a very low cost.

The following table displays the external firms that were under contract with MOSERS during FY02 for management of diversification assets. In addition, it shows all internally managed Diversification Pool assets, the managers' investment styles, ending portfolio market values for FY02 and the managerial fees paid for the fiscal year.

Investment Advisor	Po Investment Style	ortfolio Market Value as of June 30, 2002	FY02 Management Fee
BlackRock Financial			
Management, Inc.	Enhanced index		
	Mortgage and asset-backed securities	s \$ 348,389,512	\$ 347,116
Hoisington Investment			
Management Co.	Active duration		
	Treasury securities	140,990,086	200,000
NISA Investment			
Advisors, LLC	Enhanced index		
	Commodities index overlay		
	Cash investment portfolio	127,323,068	216,947
Internal Staff			
(All passive management)	Government TIPS	584,825,671	
	Lehman High Quality Corporate In	dex 225,711,384	152,539
	Cash reserves	7,776,386	
	Illiquid assets	6,607,687	
Total		\$ 1,441,623,79414	\$ 916,602

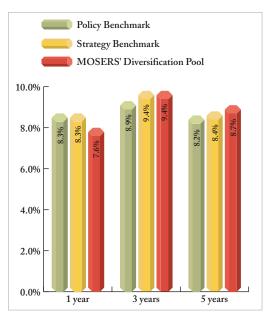
<sup>14</sup> This total excludes the impact of the rebalancing account on the Diversification Pool Portfolio.



#### **Diversification Pool Investment Returns**

The MOSERS' Diversification Pool returned 7.6% for the year, falling short of both the Policy Benchmark return and the Strategy Benchmark return, both of which were 8.3% for the fiscal year. The active duration manager's yield curve positioning as well as an overweight to medium quality corporates within the internally managed corporate portfolio were the primary reasons for

#### **Diversification Pool Returns**



underperformance. Performance in those security classes was offset, to some degree, by superior performance in the commodities portfolio and a small amount of value added in the enhanced index mortgage and asset-backed portfolio. From a longer term perspective, 3-year returns were equal to or exceeded the benchmarks while 5-year returns remain above benchmark returns, with the 5-year Diversification Pool return exceeding the policy and the strategy benchmarks by 50 and 30 basis points respectively. This is, in large part, due to the active duration manager's selection of a long portfolio in a period in which interest rates have declined very substantially.

The graph to the left shows these results.

#### **Brokerage Activity**

In FY02, MOSERS generated the following fixed income brokerage activity, ranked by percentage of total, through the purchase and sale of Diversification Pool assets.

Broker/Dealer Firms	Par Amount Traded	Market Value Traded	Percent of Total Trading Volume by Market Value
Morgan Stanley	\$546,770,987	\$553,791,818	21.6%
Barclays Capital	406,877,580	450,562,912	17.6
Lehman Brothers	258,779,200	270,400,087	10.5
Salomon Smith Barney	163,792,651	172,902,957	6.7
J. P. Morgan	147,851,674	142,853,584	5.6
Credit Suisse First Boston	137,400,051	138,211,670	5.4
Merrill Lynch	142,105,192	137,575,011	5.4
Goldman Sachs	125,132,800	113,061,122	4.4
HSBC Securities	104,875,000	109,114,476	4.3
Bear Stearns	85,764,661	88,617,529	3.5
Banc of America Securities	65,081,104	65,357,848	2.5
BNP Paribas	54,600,000	55,062,355	2.1
Deutsche Morgan Grenfell	53,505,000	53,478,975	2.1
Spear Leeds & Kellog	29,892,000	31,283,067	1.2
Greenwich Capital Markets	26,385,000	29,413,569	1.1
BancOne Capital Markets	28,904,508	28,930,190	1.1
Fidelity Capital Markets	26,000,000	26,285,040	1.0
Others (includes 11, each contributing			
less than 1%)	111,637,950	97,063,817	3.9
Totals	\$2,515,355,358	\$2,563,966,027	100.0%



# Schedule of Investment Manager Portfolios

(by Asset Class) As of June 30, 2002

		Market Value June 30, 2002	Percent of Total Fund
U.S. stock manager portfolios			
Passive/enhanced U.S. stock manager portfolios	\$	1,308,762,579	25.87%
Active U.S. stock manager portfolios		1,059,534,449	20.95
Total U.S. stock manager portfolios		2,368,297,028	46.82
N HC . 1			
Non-U.S. stock manager portfolios		447 041 412	8.86
Passive/enhanced non-U.S. stock manager portfolios		447,961,613	15.83
Active non-U.S. stock manager portfolios Total non-U.S. stock manager portfolios		800,918,661 1,248,880,274	24.69
Total non-0.5. stock manager portionos		1,240,000,274	24.07
Diversification Pool			
Nominal bond manager portfolios			
Government bond portfolios		140,991,821	2.79
Corporate bond portfolio		225,714,161	4.46
Mortgage & asset-backed securities portfolio		348,393,799	6.89
Total nominal bond manager portfolios		715,099,781	14.14
Real bond portfolio		584,832,867	11.56
Commodities portfolio		127,324,635	2.51
Total diversification pool manager portfolios		1,427,257,283	28.21
0.1			
Other portfolios		6 607 697	0.12
Other investments portfolio		6,607,687	0.13 0.15
Cash reserve portfolio	_	7,776,386	
Total other portfolios	_	14,384,073	0.28
Total all portfolios	\$	5,058,818,658	100.00%
Reconciliation to Statements of Plan Net Assets			
Total portfolio value		\$ 5,058,818,658	
STIF		(383,864,684)	
Uninvested cash		5,880	
Accrued income		(26,996,270)	
Accounts receivable securities sold		(65,020,543)	
Manager fees payable		(2,498,125)	
Accounts payable securities purchased		301,053,151	
Investments per Statements of Plan Net Assets		\$ 4,881,498,067	



### Actuary's Certification Letter



September 26, 2002

The Board of Trustees Missouri State Employees' Retirement System 907 Wildwood Drive Jefferson City, Missouri 65109

#### Dear Board Members:

The basic financial objective of the Missouri State Employees' Retirement System (MOSERS) is to establish and receive contributions, which

- (1) when expressed in terms of percents of active member payroll will remain approximately level from generation to generation of Missouri citizens, and which
- (2) when combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of MOSERS.

In order to measure progress toward this fundamental objective, MOSERS has annual actuarial valuations performed. The valuations (i) measure present financial position, and (ii) establish contribution rates that provide for the current cost and level percent of payroll amortization of unfunded actuarial accrued liabilities over a reasonable period. The latest completed actuarial valuations were based upon data and assumptions as of June 30, 2002. These valuations indicate that the contribution rates for the fiscal year ending June 30, 2004, established by the board of trustees for the benefits scheduled to be in effect on July 1, 2002, meet the basic financial objective. These contribution rates are 9.35% of payroll for 58,616 general state employees, 20.12% of payroll for 58 administrative law judges, and 51.68% of payroll for 392 judges other than administrative law judges.

The actuarial valuations are based upon financial and participant data, which is prepared by retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death, and disability among MOSERS' members and their beneficiaries. The data is reviewed by us for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized

and tabulated for the purpose of analyzing trends. The demographic assumptions were adopted by the board of trustees and were based upon actual experience of MOSERS during the years 1995-1999. The economic assumptions were adopted by the board of trustees in September 2001. Assets are valued according to a method that fully recognizes expected investment return and averages unanticipated market return over a five-year period. The assumptions and methods utilized in this valuation, in our opinion, meet the parameters established by Governmental Accounting Standards Board Statement No. 25.

The current benefit structure is outlined in the Actuarial Section. The changes made since the previous valuation are highlighted on page 104. We provided the information used in the supporting schedules in the Actuarial Section and the Schedules of Funding Progress in the Financial Section, as well as the employer contribution rates shown in the Schedule of Employer Contributions in the Financial Section.

Based upon the valuation results, it is our opinion that the Missouri State Employees' Retirement System continues in sound condition in accordance with actuarial principles of level percent of payroll financing.

Respectfully submitted,

Norman L. Jones, F.S.A. Senior Consultant & Actuary

Brad L. Armstrong, A.S.A. Senior Consultant & Actuary

Brad Clux



### Summary of Actuarial Assumptions June 30, 2002

#### **Economic Assumptions**

The investment return rate used in the valuations was 8.5% per year, compounded annually (net after investment expenses). This assumption is used to account for the fact that equal amounts of money payable at different points in time in the future do not have the same value presently.

Pay increase assumptions for individual active members are shown for sample ages on page 76. Part of the assumption for each age is for merit and/or seniority increase, and the other 4% recognizes wage inflation. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

The active member payroll is assumed to increase 4% annually, which is the portion of the individual pay increase assumptions attributable to inflation.

The annual COLA is assumed to be 4% per year on a compounded basis when a minimum COLA of 4% is in effect and 2.8% per year on a compounded basis when no minimum COLA is in effect.

The number of active members in the MSEP is assumed to remain constant although certain new hires on or after July 1, 2002, will participate in the College and University Retirement Plan (CURP). The number of active members in the ALJLAP and Judicial Plan is assumed to continue at the present number. Active and retired member data is reported as of May 31. It is assumed for valuation purposes that there is no turnover among members and no new entrants during the month of June.

#### Noneconomic Assumptions

The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the 1971 Group Annuity Mortality Table, projected to the year 2000 with a 1-year age setback for men and a 7-year age setback for women. Related values are shown on page 77. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

The probabilities of age and service retirement are shown on page 78. The first two years of eligibility if prior to age 70, were halved due to the expected emerging effect of the BackDROP. It was assumed that each member will be granted one half year of service credit for unused leave upon retirement and military service purchases.

The probabilities of withdrawal from service, death-in-service, and disability are shown for sample ages on page 76. For disability retirement, impaired longevity was recognized by use of special mortality tables.

The entry age normal actuarial cost method of valuation was used in determining liabilities and normal cost. The normal cost was based on the benefit provisions affecting new employees (MSEP 2000). Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest), which are a level percent of payroll contributions.



Employer contribution dollars were assumed to be paid in equal installments throughout the employer fiscal year.

The asset valuation method fully recognizes expected investment return and averages unanticipated market return over a five-year period.

The data about persons now covered and about present assets was furnished by the system's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.

It is assumed that, among active members, 80% are married at retirement, 70% of those dying in active service are married, and men are three years older than their spouses.

The liabilities for active members hired on or after July 1, 2000, were based on MSEP 2000 benefits. The liabilities for active members hired before July 1, 2000, were base on MSEP 2000 benefits for male general employees with an age at hire of 35 years or less, for female general employees, for contract employees, for elected officials, and for general assembly members. All others were based on MSEP benefits. The BackDROP was only explicitly valued for those assumed to receive MSEP 2000 benefits.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).



## **Summary of Actuarial Assumptions**

### Separations From Active Employment Before Service Retirement and Individual Pay Increase Assumptions Year Ended June 30, 2002

#### **MSEP**

	_			cent of Active Members ating Within the Next Year				Pay Increase Assumptions for an Individual Employee		
Sample Ages	Years of Service	With Men	ndrawal Women	D Men	eath* Women	<u>Disa</u> Men	ability Women	Merit and Seniority**	Base (Economy)	Increase Next Year
	0	25.2%	24.7%							
	1	17.1	17.7							
	2	14.4	14.4							
	3	12.8	12.8							
	4	12.0	12.0							
20	+5	12.0	11.0	.04%	.03%	.00%	.00%	2.7%	4.0%	6.7%
25		12.0	11.0	.05	.04	.05	.03	2.6	4.0	6.6
30		8.8	8.9	.06	.04	.12	.04	2.2	4.0	6.2
35		6.2	6.0	.08	.06	.16	.13	1.9	4.0	5.9
40		4.6	4.9	.12	.08	.21	.21	1.4	4.0	5.4
45		3.5	4.3	.19	.11	.29	.25	1.2	4.0	5.2
50		2.8	3.6	.35	.17	.41	.41	0.7	4.0	4.7
55		2.4	2.9	.59	.31	.77	.85	0.7	4.0	4.7
60		2.4	2.9	.90	.54	1.40	1.50	0.0	4.0	4.0
65		2.4	2.9	1.44	.83	0.00	0.00	0.0	4.0	4.0

<sup>\* 2%</sup> of the deaths in active service are assumed to be duty-related.

ALJLAP

	Percent of Active Members Separating Within the Next Year							Increase Assumpti an Individual Empl	
Sample	With	ndrawal	Men	eath	Disa	bility	Merit and	Base	Increase
Ages	Men	Women		Women	Men	Women	Seniority	(Economy)	Next Year
25	7.5%	6.0%	.05%	.04%	.02%	.02%	1.6%	4.0%	5.6%
30	6.6	4.9	.06	.05	.03	.03	1.2	4.0	5.2
35	4.7	3.5	.08	.06	.04	.07	0.9	4.0	4.9
40	3.3	2.8	.11	.08	.05	.11	0.4	4.0	4.4
50 55 60 65	2.6 2.6 2.0 1.5	2.2 1.6 0.8 0.6	.35 .59 .90 1.44	.17 .31 .54 .83	.12 .23 .33	.35 .49 .53	0.2 0.2 0.2 0.0 0.0	4.0 4.0 4.0 4.0	4.2 4.2 4.0 4.0

<sup>\*\*</sup> Does not apply to members of the general assembly.



# **Summary of Actuarial Assumptions**

Single Life Retirement Values June 30, 2002

#### Present Value of \$1/Month the First Year Increasing 4%/2.8% Yearly

Future Life Expectancy (Years)

Attained	Ser	vice	Disa	bility	Ser	vice	Disa	bility
Ages	Men	Women	Men	Women	Men	Women	Men	Women
40	\$ 202.23	\$ 212.07	\$ 135.46	\$ 156.68	38.46	44.22	19.70	26.02
45	191.81	204.06	126.32	150.16	33.73	39.41	17.50	23.70
50	179.47	194.06	116.10	142.75	29.17	34.67	15.35	21.39
55	165.25	182.08	106.06	135.11	24.82	30.06	13.43	19.18
60	148.90	168.25	97.62	126.74	20.70	25.67	11.87	17.01
65	130.43	152.36	90.66	117.09	16.82	21.50	10.56	14.82
70	110.79	134.27	82.12	105.05	13.32	17.57	9.13	12.50
75	91.75	114.73	70.79	89.33	10.36	13.99	7.49	10.00
80	73.37	95.50	56.17	71.93	7.83	10.91	5.66	7.62
85	57.86	76.89	42.26	56.17	5.89	8.29	4.08	5.66



# **Summary of Actuarial Assumptions**

### Percent of Eligible Active Members Retiring Next Year June 30, 2002

#### **MSEP**

Retirement	Per	rcent	Retirement	Pero	ent
Ages	Men	Women	Ages	Men	Women
50	25.0%	20.0%	65	40.0%	50.0%
51	25.0	19.5	66	32.0	27.0
52	21.0	18.5	67	26.0	27.0
53	17.0	16.0	68	23.0	27.0
54	12.5	12.5			
55	6.5	6.7	69	23.0	27.0
56	6.5	6.7	70	23.0	27.0
57	6.5	6.7	71	23.0	27.0
58	6.5	6.7	72	23.0	27.0
59	6.5	8.3	73	23.0	27.0
60	9.5	12.0	74	23.0	27.0
61	13.0	16.5	75 & over	100.0	100.0
62	29.0	28.0			
63	24.0	18.0			
64	30.0	33.0			

#### ALJLAP

Retirement	Pe	rcent	Retirement	Perc	ent
Ages	Men	Women	Ages	Men	Women
55	5.0%	8.0%	65	25.0%	55.0%
56	5.0	8.0	66	20.0	35.0
57	5.0	8.0	67	20.0	25.0
58	5.0	8.0	68	30.0	25.0
59	5.0	8.0	69	30.0	60.0
60	15.0	25.0	69	30.0	60.0
61	10.0	15.0	70	30.0	60.0
62	15.0	25.0	71	30.0	60.0
63	10.0	15.0	72	30.0	60.0
64	10.0	25.0	73	30.0	60.0
			74	30.0	60.0
			75 & over	100.0	100.0

#### Judicial Plan

Retirement	Pe	rcent	Retirement	Pero	ent
Ages	Men	Women	Ages	Men	Women
55	5.0%	8.0%	65	25.0%	40.0%
56	5.0	8.0	66	20.0	25.0
57	5.0	8.0	67	20.0	25.0
58	5.0	8.0	68	20.0	25.0
59	5.0	8.0	69	30.0	50.0
60	10.0	15.0	70	100.0	100.0
61	5.0	10.5			
62	10.0	15.0			
63	5.0	10.0			
64	5.0	10.0			



### Summary of Actuarial Assumptions

#### Miscellaneous and Technical Assumptions June 30, 2002

### Pay Increase Timing

Middle of fiscal year.

#### **Decrement Timing**

Decrements of all types are assumed to occur mid-year.

#### Eligibility Testing

Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

#### Benefit Service

Exact fractional service is used to determine the amount of benefit payable.

#### Decrement Relativity

Decrement rates are used directly from the experience study without adjustments for multiple decrement table effects.

#### **Decrement Operation**

Disability and turnover decrements do not operate during the first five years of service. They also do not operate during retirement eligibility.

#### Normal Form of Benefit

The assumed normal form of benefit is the straight life form for the MSEP 2000 with 50% continuing to an eligible surviving spouse for the MSEP. No adjustment has been made for post-retirement option election changes.

#### Loads

No loads were used.

#### **Incidence of Contributions**

Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.



# **Summary of Member Data Included in Valuations**

### **Pension Trust Funds** June 30, 2002

#### **Active Members**

			Gro	Group Averages			
Valuation Group	Number	Payrol1	Salary	Age (Yrs.)	Service (Yrs.)		
Missouri State Employees' Plan							
Regular state employees	53,601	\$1,558,658,691	\$ 29,079	43.0	9.4		
Elected state officials	6	590,976	98,496	45.1	5.1		
Legislative clerks	100	2,689,932	26,899	52.6	13.3		
Legislators	195	6,122,532	31,398	51.1	8.6		
Uniformed members of the water patrol	79	3,084,612	39,046	38.5	12.9		
Conservation department	1,534	57,189,062	37,281	42.6	13.1		
School-term salaried employees	_3,101	144,947,679	46,742	50.2	14.1		
Total MSEP group	58,616	\$1,773,283,484	30,253	43.4	9.8		
Administrative Law Judges and							
Legal Advisors' Plan	58	\$ 4,779,504	82,405	48.8	9.9		
Judicial Plan	392	\$ 40,068,744	102,216	52.6	11.0		

#### **Retired Lives**

			Group Averages		
Type of Benefit Payment	Number	Annual Benefits	Benefit	Age (Yrs.)	
Missouri State Employees' Plan					
Retirement	18,876	\$238,156,189	\$12,617	70.2	
Disability	33	129,062	3,911	57.3	
Survivor of active member	1,104	7,397,969	6,701	58.5	
Survivor of retired member	1,489	10,910,168	7,327	72.6	
Total MSEP group	21,502	\$256,593,388	11,933	69.7	
Administrative Law Judges'					
and Legal Advisors' Plan	25	\$ 868,652	34,746	74.3	
Judicial Plan	383	\$ 16,446,999	42,943	75.3	

#### Others

Group	Terminated Vested	Leave of Absence	Long-Term Disability
Missouri State Employees' Plan Administrative Law Judges	12,257	317	1,052
and Legal Advisors' Plan	19	0	0
Judicial Plan	63	0	0



### Active Members by Attained Age and Years of Service June 30, 2002

**MSEP** 

	Years of Service to Valuation Date								Totals
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Number	Valuation Payroll
II 1 20	(0							(0	# 1.172.21F
Under 20	68	10						68	\$ 1,173,215
20-24	2,076	19	7					2,095	42,749,180
25-29	4,528	784	7	20				5,319	132,458,951
30-34	3,855	2,607	459	29	22			6,950	191,670,911
35-39	2,937	2,034	1,482	663	32	00		7,148	208,888,579
40-44	2,973	1,856	1,484	1,394	775	83	<b>50</b>	8,565	259,412,036
45-49	2,617	1,770	1,489	1,318	1,225	848	58	9,325	298,271,440
50-54	2,213	1,559	1,463	1,241	1,134	1,211	367	9,188	303,790,949
55-59	1,352	1,119	1,020	942	748	492	430	6,103	203,773,736
60	197	154	167	134	64	76	70	862	29,094,917
61	134	156	144	110	75	60	77	756	25,017,583
62	123	91	117	84	53	28	42	538	17,620,289
63	85	76	67	48	36	27	56	395	13,655,639
64	62	64	66	51	33	28	47	351	12,628,721
65	45	54	47	40	17	23	34	260	9,271,539
66	27	30	29	29	14	9	19	157	5,642,850
67	25	20	31	26	13	8	16	139	4,940,074
68	27	10	17	19	9	5	15	102	3,399,514
69	13	8	15	7	9	2	4	58	2,239,130
70 & Over	42	46	38	37	31	15	28	237	7,584,231
Totals	23,399	12,457	8,142	6,172	4,268	2,915	1,263	58,616	\$1,773,283,484

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

#### Group Averages:

43.4 years Age Service 9.8 years Annual Pay \$30,253



### Active Members by Attained Age and Years of Service June 30, 2002

**ALJLAP** 

	Years of Service to Valuation Date								Totals		
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Number	Valuation Payroll		
30-34	2							2	\$ 163,200		
35-39	5	2	2					9	676,800		
40-44	2	5	4					11	909,384		
45-49	4	3	4	1				12	997,728		
50-54		3	3	4				10	872,400		
55-59	2	1		1	1	1		6	462,264		
60		1		1				2	178,032		
61	1							1	94,032		
65	1					1		2	170,832		
67	1			1				2	178,032		
79 & Over							1	1	76,800		
Totals	18	15	13	8	1	2	1	58	\$ 4,779,504		

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

#### Group Averages:

Age 48.8 years Service 9.9 years Annual Pay \$82,405

#### Judicial Plan

	Years of Service to Valuation Date								Totals	
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Number	Valuation Payroll	
30-34	2							2	\$ 192,000	
35-39	13	1	1					15	1,464,000	
40-44	26	13	3	1				43	4,298,016	
45-49	18	25	10	7	4			64	6,514,032	
50-54	34	23	17	18	13	3		109	11,225,568	
55-59	34 17	17	17	18	10	3 7		84		
						/			8,570,040	
60	3	2	2	6	1		1	14	1,442,016	
61	1	2 2	6	4	1	2	1	15	1,567,008	
62		2	1	2	2	3	2	10	1,027,008	
63	•		3	1	1		2	7	734,016	
64	2	1	4		1			8	835,008	
65			1	1			1	3	319,008	
66			3	1	1		1	6	626,016	
67			1			1		2	216,000	
68		1				1	2	4	408,000	
69					2	1		3	331,008	
70		1			1		1	3	300,000	
Totals	116	89	71	55	37	16	8	392	\$40,068,744	

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

#### Group Averages:

52.9 years Age Service 11 years Annual Pay \$102,216



### **Schedule of Active Member Valuation Data** Six Years Ended June 30, 2002

#### **MSEP**

	Schedule of Active Member Valuation Data						
Valuation Date	Number	Annual Payroll	Annual Average Pay	Percentage of Increase in Average Pay			
June 30, 1997	52,737	\$ 1,359,656,666	\$ 25,782	4.59%			
June 30, 1998	54,544	1,459,712,203	26,762	3.80			
June 30, 1999	56,158	1,564,551,532	27,860	4.10			
June 30, 2000	57,774	1,683,697,080	29,143	4.61			
June 30, 2001	58,431	1,758,190,268	30,090	3.25			
June 30, 2002	58,616	1,773,283,484	30,253	.54			

#### **ALJLAP**

	Schedule of Active Member Valuation Data						
Valuation Date	Number	Annual Payroll	Annual Average Pay	Percentage of Increase in Average Pay			
June 30, 1997	45	\$ 2,865,733	\$ 63,683	8.24%			
June 30, 1998	42	2,806,436	66,820	4.93			
June 30, 1999	47	3,488,698	74,228	11.09			
June 30, 2000	52	4,072,888	78,325	5.52			
June 30, 2001	57	4,661,020	81,772	4.40			
June 30, 2002	58	4,779,504	82,405	.77			

#### Judicial Plan

#### Schedule of Active Member Valuation Data

Valuation Date	Number	Annual Payroll	Annual Average Pay	Percentage of Increase in Average Pay
June 30, 1997	365	\$ 31,663,101	\$ 86,748	6.16%
June 30, 1998	365	32,446,141	88,894	2.47
June 30, 1999	366	34,162,013	93,339	5.00
June 30, 2000	375	37,107,487	98,953	6.01
June 30, 2001	381	38,687,793	101,543	2.62
June 30, 2002	392	40,068,744	102,216	.66



### Retirees and Beneficiaries Added and Removed Six Years Ended June 30, 2002

#### **MSEP**

Added to Rolls

Fiscal Year Ended	Classification	Benefit Type	Number	Annual Allowances
June 30, 1997	General employee	Retirement	1,083	\$ 14,896,637
,	1 7	Survivor of active	82	582,915
		Survivor of retired	70	693,859
		Disability	1	13,242
		Occupational disability	0	0
	Lincoln University-vested	Retirement	1	7,710
	•	Survivor of active	0	0
	Legislators	Retirement	20	374,048
	Č	Survivor of active	0	1,888
		Survivor of retired	1	13,414
	Elected state officials	Retirement	2	86,684
		Survivor of active	0	0
		Survivor of retired	0	0
June 30, 1998	General employee	Retirement	1,270	19,629,029
June 30, 1770	General employee	Survivor of active	81	665,237
		Survivor of retired	122	951,214
		Disability	0	7,932
		Occupational disability	Ő	0
	Lincoln University-vested	Retirement	1	994
	Emedia emverore, vected	Survivor of active	0	0
	Legislators	Retirement	13	244,763
	2081011110110	Survivor of active	1	10,818
		Survivor of retired	3	34,201
	Elected state officials	Retirement	0	2,551
		Survivor of active	0	0
		Survivor of retired	1	21,512
I 20, 1000	C 1 1	Detiment	1 202	10 5// 5/2
June 30, 1999	General employee	Retirement Survivor of active	1,282	18,566,542
			95 152	773,822
		Survivor of retired	0	1,081,059
		Disability	0	4,558 0
	I :1 I I-::	Occupational disability Retirement	1	1,051
	Lincoln University-vested	Survivor of active	0	(262)
	Legislators	Retirement	10	257,072
	r-cgistators	Survivor of active		26,662
		Survivor of active Survivor of retired	2 5	39,656
	Elected state officials	Retirement	1	49,578
	Diction state officials	Survivor of active	0	49,378
		Survivor of active Survivor of retired	0	861
		Survivor of fettied	U	001

MSEP continued on pages 86-87.



Remov	ved From Rolls	R	olls at End of Year	_		
Number	Annual Allowances	Number	Annual Allowances	Percentage Increase in Annual Allowances	Average Annual Allowance	Percentage Increase in Average Annual Allowance
595 23 19 11 0 0 0 6 1 0 0	\$ 4,153,718 74,143 103,644 47,701 0 0 104,376 18,693 0 0 0	13,912 806 620 76 1 5 1 153 5 28 3 0	\$ 117,275,333 3,696,157 3,776,657 283,187 17,448 33,425 2,886 2,571,905 30,399 195,538 126,128 0	10.08% 15.96 18.52 (10.85) 0.00 29.98 0.00 11.71 (35.60) 7.37 219.76 0.00 0.00	\$ 8,430 4,586 6,091 3,726 17,448 6,685 2,886 16,810 6,080 6,983 42,043 0	6.22% 7.47 8.77 0.88 0.00 3.99 0.00 1.49 (22.72) 3.53 6.59 0.00 0.00
650 27 42 13 0 0 0 8 0 3 1 0	4,947,946 81,763 187,731 49,220 0 0 129,692 0 11,086 41,811 0	14,532 860 700 63 1 6 1 158 6 28 2 0 1	131,956,416 4,279,631 4,540,141 241,899 17,448 34,419 2,886 2,686,977 41,217 218,653 86,868 0 21,512	12.52 15.79 20.22 (14.58) 0.00 2.97 0.00 4.47 35.59 11.82 (31.13) 0.00 0.00	9,080 4,976 6,486 3,840 17,448 5,736 2,886 17,006 6,870 7,809 43,434 0 21,512	7.72 8.52 6.48 3.05 0.00 (14.19) 0.00 1.17 12.99 11.82 3.31 0.00 0.00
637 21 37 4 0 1 0 7 0 6 0 0	4,686,352 47,199 193,063 21,045 0 4,327 0 105,277 0 60,921 0 0	15,177 934 815 59 1 6 1 161 8 27 3 0 1	145,836,607 5,006,254 5,428,137 225,412 17,448 31,143 2,623 2,838,771 67,879 197,388 136,446 0 22,372	10.52% 16.98 19.56 (6.82) 0.00 (9.52) (9.09) 5.65 64.69 (9.73) 57.07 0.00 4.00	9,609 5,360 6,660 3,821 17,448 5,190 2,623 17,632 8,485 7,311 45,482 0 22,372	5.82 7.71 2.69 (0.50) 0.00 (9.52) (9.09) 3.68 23.51 (6.38) 4.71 0.00 4.00



### Retirees and Beneficiaries Added and Removed Six Years Ended June 30, 2002

#### MSEP (continued from previous page)

		_		_	
А	AА	$\Delta A$	to	R,	11e

Fiscal Year Ended	Classification	Benefit Type	Number	Annual Allowances
T 20 2000		D :	4 227	* 20 272 24 4
June 30, 2000	General employee	Retirement	1,337	\$ 20,272,214
		Survivor of active	86	1,020,432
		Survivor of retired	416	2,481,786
		Disability	1	8,081
		Occupational disability	0	0
	Lincoln University-vested	Retirement	1	5,860
		Survivor of active	0	0
	Legislators	Retirement	8	204,076
	~	Survivor of active	0	2,157
		Survivor of retired	3	36,026
	Elected state officials	Retirement	0	6,821
		Survivor of active	0	0
		Survivor of retired	0	895
June 30, 2001	General employee	Retirement	2,580	55,234,780
June 00, 2001	Contrar empreyee	Survivor of active	84	814,517
		Survivor of retired	197	1,832,029
		Disability	0	3,518
		Occupational disability	ő	0
	Lincoln University-vested	Retirement	1	1,841
	Efficient Offiversity-vested	Survivor of active	0	0
	Logislators	Retirement	14	436,356
	Legislators	Survivor of active	0	2,468
		Survivor of retired	7	
	Elected state officials			89,399
	Elected state officials	Retirement	6	230,136
		Survivor of active	1	56,938
		Survivor of retired	0	931
June 30, 2002	General employee	Retirement	1,840	32,360,047
		Survivor of active	84	842,610
		Survivor of retired	209	1,805,487
		Disability	0	3,474
		Occupational disability	0	0
	Lincoln University-vested	Retirement	2	6,061
	· ·	Survivor of active	0	0
	Legislators	Retirement	8	238,058
	8	Survivor of active	ĺ	6,950
		Survivor of retired	4	59,947
	Elected state officials	Retirement	0	304
		Survivor of active	Ö	2,277
		Survivor of retired	0	968
		Survivor of fettled	U	700



Remov	ed from Rolls	Rolls at	End of Year			
Number	Annual Allowances	Number	Annual Allowances	Percentage Increase in Annual Allowances	Average Annual Allowance	Percentage Increase in Average Annual Allowance
649 37 47 8 0 0 0 0 0 0 0 0 0	\$ 5,324,814 110,049 294,927 43,141 0 0 0 95,126 0 0 0	15,865 983 1,184 52 1 7 1 166 8 30 3	\$ 160,784,007 5,916,636 7,614,996 190,352 17,448 37,003 2,623 2,947,722 70,036 233,414 143,267 0 23,267	10.25% 18.18 40.29 (15.55) 0.00 18.82 0.00 3.84 3.18 18.25 5.00 0.00 4.00	\$ 10,135 6,019 6,432 3,661 17,448 5,286 2,623 17,757 8,754 7,780 47,756 0 23,267	5.47% 12.29 (3.43) (4.19) 0.00 1.84 0.00 0.71 3.18 6.43 5.00 0.00 4.00
670 27 67 14 0 0 0 9 0 1 0	5,935,443 173,754 328,785 55,684 0 0 156,423 0 11,056 0	17,775 1,040 1,314 38 1 8 1 171 8 36 9	210,083,344 6,557,400 9,118,239 138,186 17,448 38,844 2,623 3,227,654 72,503 311,756 373,403 56,938 24,198	30.66 10.83 19.74 (27.41) 0.00 4.97 0.00 9.50 3.52 33.56 160.63 0.00 4.00	11,819 6,305 6,939 3,636 17,448 4,855 2,623 18,875 9,063 8,660 41,489 56,938 24,198	16.62 4.76 7.89 (0.66) 0.00 (8.15) 0.00 6.29 3.52 11.30 (13.12) 0.00 4.00
685 30 67 7 0 0 0 4 0 1 0 0	6,249,943 137,619 378,545 32,754 0 0 80,340 0 4,195 0	18,930 1,094 1,456 31 1 10 1 175 9 39 9 1	236,193,448 7,262,391 10,545,180 108,906 17,448 44,905 2,623 3,385,372 79,453 367,508 373,707 59,215 25,166	12.43 10.75 15.65 (21.19) 0.00 15.60 0.00 4.89 9.59 17.88 0.08 4.00 4.00	12,477 6,638 7,243 3,513 17,448 4,490 2,623 19,345 8,828 9,423 41,523 59,215 25,166	5.57 5.29 4.37 (3.38) 0.00 (7.51) 0.00 2.49 (2.59) 8.81 0.08 4.00 4.00



### Retirees and Beneficiaries Added and Removed Six Years Ended June 30, 2002

#### ALJLAP

		Adde	d to Rolls	Remove	ed From Rolls	
Fiscal Year Ended	Benefit Type	Number	Annual Allowances	Number	Annual Allowances	
June 30, 1997	Retirement	1	\$ 51,588	4	\$ 152,520	
	Survivor of active	0	621	0	0	
	Survivor of retired	3	58,510	0	0	
June 30, 1998	Retirement	3	123,798	0	0	
J ,	Survivor of active	0	645	0	0	
	Survivor of retired	0	3,734	0	0	
June 30, 1999	Retirement	0	24,637	0	0	
June 50, 1777	Survivor of active	0	671	0	0	
	Survivor of retired	Ö	3,883	Ő	ő	
June 30, 2000	Retirement	0	23,908	1	42,874	
June 30, 2000	Survivor of active	0	698	1	18,148	
	Survivor of retired	1	25,475	0	0	
Iuna 20, 2001	Retirement	1	57 421	1	20.647	
June 30, 2001	Survivor of active	1	57,621	0	39,647	
	Survivor of retired	1	25,674	0	0	
I 20, 2002	D. 4	1	(7.077	1	46 500	
June 30, 2002	Retirement Survivor of active	1	67,877	1	46,580	
	Survivor of active Survivor of retired	0	5 502	0	0	
	Survivor of retired	U	5,582	U	U	



Rolls at End of Year				Domontono
Number	Annual Allowances	Percentage Increase in Annual Allowances	Average Annual Allowance	Percentage Increase in Average Annual Allowance
14	\$ 492,134	(17.02)%	\$ 35,152	0.76%
1	16,134	4.00	16,134	4.00
6	93,343	167.98	15,557	33.99
17	615,933	25.16	36,231	3.07
1	16,779	4.00	16,779	4.00
6	97,077	4.00	16,179	4.00
17	640,570	4.00	37,681	4.00
1	17,450	4.00	17,450	4.00
6	100,960	4.00	16,827	4.01
16	621,604	(2.96)	38,850	3.10
0	0	0.00	0	0.00
7	126,435	25.23	18,062	7.34
16	639,577	2.89	39,974	2.89
0	0	0.00	0	0.00
8	152,109	20.31	19,014	5.27
16	660,873	3.33	41,305	3.33
0	0	0.00	0	0.00
8	157,691	3.67	19,711	3.67



### Retirees and Beneficiaries Added and Removed Six Years Ended June 30, 2002

### Judicial Plan

		Adde	d to Rolls	Remove	ed From Rolls	
Fiscal Year Ended	Benefit Type	Number	Annual Allowances	Number	Annual Allowances	
June 30, 1997	Retirement	5	\$ 581,733	6	\$ 237,358	
	Survivor of active	1	34,290	1	15,186	
	Survivor of retired	4 1	136,079 42,593	8	70,013 0	
	Disability	1	42,393	U	U	
June 30, 1998	Retirement	22	1,427,677	8	341,058	
J , _ , ,	Survivor of active	$\frac{-2}{27}$	362,157	0	0	
	Survivor of retired	6	185,841	34	424,102	
	Disability	0	2,458	0	0	
June 30, 1999	Retirement	22	1,293,321	11	514,874	
June 30, 1777	Survivor of active	1	53,269	3	31,176	
	Survivor of retired	6	185,690	6	142,056	
	Disability	1	47,771	3	130,852	
June 30, 2000	Retirement	18	1,343,591	11	535,292	
June 30, 2000	Survivor of active	2	76,496	1	6,813	
	Survivor of retired	$1\overline{0}$	295,547	7	93,502	
	Disability	1	46,500	0	0	
June 30, 2001	Retirement	25	2,241,337	8	354,861	
Julie 30, 2001	Survivor of active	23	83,627	2	34,642	
	Survivor of retired	1	76,395	4	42,983	
	Disability	0	1,500	Ö	0	
June 30, 2002	Retirement	11	984,612	9	455,021	
June 30, 2002	Survivor of active	1	57,051	1	28,541	
	Survivor of retired	5	195,971	5	84,932	
	Disability	0	0	1	48,000	
		-	o o	-	.0,000	



Rolls at End of Year				Percentage
Number	Annual Allowances	Percentage Increase in Annual Allowances	Average Annual Allowance	Increase in Average Annual Allowance
206	\$ 8,693,288	4.12%	\$ 42,200	4.63%
18	372,478	5.41	20,693	5.40
108	1,420,895	4.88	13,156	8.75
2	80,623	112.00	40,311	6.00
220	9,779,907	12.50	44,454	5.34
45	734,634	97.23	16,325	(21.11)
80	1,182,635	(16.77)	14,783	12.37
2	83,081	3.05	41,541	3.05
231	10,558,354	7.96	45,707	2.82
43	756,728	3.01	17,598	7.80
80	1,226,269	3.69	15,328	3.69
0	0	0.00	0	0.00
238	11,366,653	7.66	47,759	4.49
44	826,410	9.21	18,782	6.73
83	1,428,314	16.48	17,209	12.27
1	46,500	100.00	46,500	100.00
255	13,253,130	16.60	51,973	8.82
44	875,395	5.93	19,895	5.93
80	1,461,726	2.34	18,272	6.18
1	48,000	3.23	48,000	3.23
257	13,782,721	4.00	53,629	3.19
44	903,905	3.26	20,543	3.26
80	1,572,765	7.60	19,660	7.59
0	0	(100.00)	0	0.00



# **Short-Term Solvency Test**

### Pension Trust Funds Ten Years Ended June 30, 2002

#### **MSEP**

	A	ctuarial Accrued L					
Fiscal Year	Member Contributions (1)	Current Retirees and Beneficiaries (2)	Active and Inactive Members, Employer Financed Portion (3)	Actuarial Value of Assets	Percentage of Covered by A		
1993	\$ 448,909	\$ 743,697,883	\$ 1,703,075,268	\$ 2,236,558,739	100.0%	100.0%	87.6%
1994	448,559	909,819,763	2,009,188,103	2,425,134,504	100.0	100.0	75.4
1995	448,559	1,010,431,608	2,139,916,413	2,649,077,134	100.0	100.0	76.6
1996	448,559	1,156,347,608	2,283,330,316	2,927,896,643	100.0	100.0	77.6
1997	448,501	1,552,966,747	2,930,632,553	3,580,974,502	100.0	100.0	69.2
1998	447,716	1,688,502,950	3,229,936,517	4,210,635,094	100.0	100.0	78.1
1999	0	1,970,504,367	3,535,464,262	4,908,820,033	100.0	100.0	83.1
2000	0	2,142,487,495	3,778,196,697	5,511,714,616	100.0	100.0	89.2
2001	0	2,496,277,500	3,568,889,216	5,881,232,850	100.0	100.0	94.8
2002	0	2,716,457,033	3,577,815,242	6,033,133,598	100.0	100.0	92.7

#### **ALJLAP**

	Ac	tuarial Accrued L					
Fiscal Year	Member Contributions (1)	Current Retirees and Beneficiaries (2)	Active and Inactive Members, Employer Financed Portion (3)	Actuarial Value of Assets	Percentage of A Covered by A (1)		
1993	\$ O	\$ 5,615,161	\$ 2,549,307	\$ 5,864,317	100.0%	100.0%	9.8%
1994	0	5,973,718	2,793,014	6,229,224	100.0	100.0	9.1
1995	0	6,088,732	3,641,223	6,655,207	100.0	100.0	15.6
1996	0	6,196,526	4,079,837	7,258,814	100.0	100.0	26.0
1997	0	6,569,957	4,857,224	8,864,395	100.0	100.0	47.2
1998	0	7,415,852	5,471,056	10,285,233	100.0	100.0	52.4
1999	0	7,883,988	6,890,537	11,763,737	100.0	100.0	56.3
2000	0	7,526,118	8,995,625	13,191,825	100.0	100.0	63.0
2001	0	7,534,368	9,275,594	14,410,199	100.0	100.0	74.1
2002	0	8,268,650	9,906,692	15,172,619	100.0	100.0	69.7

#### Judicial Plan

	Act							
Fiscal Year	Member Contributions (1)	Current Retirees and Beneficiaries (2)	Active and Inactive Members, Employer Financed Portion (3)	Actuarial Value of Assets		Percentage of A Covered by As (1)		
	( )	( )	(-)			(-)	( )	(-)
1993	\$ O	\$ 65,843,955	\$ 66,598,009	\$	0	100.0%	0.0%	0.0%
1994	0	70,477,754	71,117,871		0	100.0	0.0	0.0
1995	0	81,586,593	72,060,389		0	100.0	0.0	0.0
1996	0	86,145,180	75,588,930		0	100.0	0.0	0.0
1997	0	99,662,179	97,810,394		0	100.0	0.0	0.0
1998	0	108,392,273	99,187,524		0	100.0	0.0	0.0
1999	0	120,543,611	107,258,730	6,067,30	5	100.0	5.0	0.0
2000	0	131,199,867	110,597,474	13,861,76	9	100.0	10.6	0.0
2001	0	143,163,718	104,815,186	22,613,05	0	100.0	15.8	0.0
2002	0	149,135,989	106,979,463	29,651,11	3	100.0	19.9	0.0



### **Derivation of Experience Gain (Loss)**

#### **MSEP**

Actual experience will never coincide exactly with assumed experience (except by coincidence). Gains and losses may offset each other over a period of years, but sizeable year-to-year variations from assumed experience are common. Detail on the derivation of the experience gain (loss) is shown below.

		\$ Millions
(1)	UAAL* at beginning of year	\$183.9
(2)	Normal cost	144.5
(3)	Actual employer contributions	209.5
(4)	Interest accrual: (1)x.085+[(2)-(3)]x(.085/2)	12.9
(5)	Expected UAAL before changes: (1)+(2)-(3)+(4)	131.8
(6)	Change from any changes in benefits, assumptions, or methods	(103.5)
(7)	Expected UAAL after changes: (5)+(6)	28.3
(8)	Actual UAAL at end of year	261.1
(9)	Gain (loss) (7)-(8)	(232.8)
(10)	Gain (loss) as a percent of actuarial accrued liabilities at start of year (\$6,065)	(3.8)%

<sup>\*</sup> Unfunded actuarial accrued liability.

Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities
2.9%
0.6
0.4
5.5
5.5
4.7
2.7
(4.4)
(3.8)



### **Derivation of Experience Gain (Loss)**

#### **ALJLAP**

The actuarial gains or losses realized in the operation of the retirement system provide an experience test. Gains and losses are expected to cancel each other over a period of years but sizable year-to-year fluctuations are common. Detail on the derivation of the actuarial gain (loss) is shown below, along with a year-by-year comparative schedule.

		\$ Millions
(4)	TT4.4T % 1	* * * * *
(1)	UAAL* at beginning of year	\$ 2.40
(2)	Normal cost	.82
(3)	Employer contributions	1.07
(4)	Interest	
	a. on (1)	.20
	b. on (2)	.03
	c. on (3)	.05
	d. total [a+b-c]	.18
(5)	Expected UAAL end of year before changes	2.33
(6)	Change in UAAL end of year	
	a. amendments	0
	b. assumptions	0
	c. methods	(.32)
	d. total	(.32)
(7)	Expected UAAL after changes: (5)+(6d.)	2.01
(8)	Actual UAAL at end of year	3.00
(9)	Gain (loss) (7)-(8)	(.99)
(10)	Gain (loss) as a percent of actuarial accrued liabilities	. ,
	at start of year (\$16,809,962)	(5.9)%

<sup>\*</sup> Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities
2000	0.3%
2001	(1.3)
2002	(5.9)



### **Derivation of Experience Gain (Loss)**

#### Judicial Plan

The actuarial gains or losses realized in the operation of the retirement system provide an experience test. Gains and losses are expected to cancel each other over a period of years but sizable year-to-year fluctuations are common. Detail on the derivation of the actuarial gain (loss) is shown below, along with a year-by-year comparative schedule.

		\$ Millions
4.1		
(1)	UAAL* at beginning of year	\$ 225.37
(2)	Normal cost	7.67
(3)	Employer contributions	22.09
(4)	Interest	
	a. on (1)	19.16
	b. on (2)	.33
	c. on (3)	.94
	d. total [a+b-c]	18.55
(5)	Expected UAAL end of year before changes	229.50
(6)	Change in UAAL end of year	
	a. amendments	0
	b. assumptions	(3.63)
	c. methods	0
	d. total	(3.63)
(7)	Expected UAAL after changes: (5)+(6d.)	225.87
(8)	Actual UAAL at end of year	226.46
(9)	Gain (loss) (7)-(8)	(.59)
(10)	Gain (loss) as a percent of actuarial accrued liabilities	, ,
/	at start of year (\$247,978,904)	(0.2)%

<sup>\*</sup> Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities
2000	(1.7)%
2001	(3.2)
2002	(0.2)



#### MSEP and MSEP 2000

(Comparison of Plans for General State Employees)

Plan Provision	MSEP	MSEP 2000	
Membership eligibility	Members who work in a position normally requiring at least 1,000 hours of work a year.	Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.	
		Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.	
Normal retirement eligibility	Age 65 and active with 4 years of service, Age 65 with 5 years of service, Age 60 with 15 years of service, or "Rule of 80" - minimum age 50.	Age 62 with 5 years of service or "Rule of 80" - minimum age 50.	
Early retirement eligibility	Age 55 with 10 years of service.	Age 57 with 5 years of service.	
Benefit Life benefit	1.6% x final average pay (FAP) x service.	1.7% x FAP x service.	
Temporary benefit	Not available.	0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80").	
Vesting	5 years of service.	5 years of service.	
In-service cost-of-living adjustment (COLA)	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.	
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the change in the consumer price index (CPI) with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.	Annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.	
	If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.		
Survivor benefit (Death before retirement) Non duty-related death	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.	
Duty-related death	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).	
Optional forms of payment (Death after retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  - Life Income Annuity  - Unreduced Joint & 50% Survivor  - Joint & 100% Survivor  - 60 or 120 Guaranteed Payments  - BackDROP	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  - Life Income Annuity  - Joint & 50% Survivor  - Joint & 100% Survivor  - 120 or 180 Guaranteed Payments  - BackDROP	

<sup>\*</sup> This summary describes the plan provisions of the Revised Statutes of Missouri (RSMo), as amended, that governed the programs, which MOSERS administered during the period covered by this report. It does not overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply. The MSEP 2000 became effective July 1, 2000.



#### MSEP and MSEP 2000

(Comparison of Plans for Uniformed Members of the Water Patrol)

Plan Provision	MSEP	MSEP 2000
Membership eligibility	Members who work in a position normally requiring at least 1,000 hours of work a year.	Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.
		Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.
Normal retirement eligibility	Age 55 and active with 4 years of service, Age 55 with 5 years of service, or "Rule of 80" - minimum age 50.	Age 62 with 5 years of service or "Rule of 80" - minimum age 50.
Early retirement eligibility	Not available.	Age 57 with 5 years of service.
Benefit Life benefit	1.6% x FAP x service increased by 33.3%.	1.7% x FAP x service.
Temporary benefit	Not available.	0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80").
Vesting	5 years of service.	5 years of service.
In-service COLA	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.	Annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.
	If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.	
Survivor benefit		
(Death before retirement) Non duty-related death	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.
Duty-related death	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).
Optional forms of payment (Death after retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  - Life Income Annuity  - Unreduced Joint & 50% Survivor  - Joint & 100% Survivor  - 60 or 120 Guaranteed Payments  - BackDROP	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments - BackDROP



#### MSEP and MSEP 2000 (Comparison of Plans for Legislators)

Plan Provision	MSEP	MSEP 2000
Membership eligibility	Elected to the general assembly.	Elected to the general assembly on or after July 1, 2000.
Normal retirement eligibility	Age 55 with 3 full-biennial assemblies.	Age 55 with 2 full-biennial assemblies or "Rule of 80" - minimum age 50.
Early retirement eligibility	Not available.	Not available.
Benefit Life benefit	\$150 per month per biennial assembly.	(Monthly base pay ÷ 24) x service capped at 100% of pay.
Temporary benefit	Not available.	Not available.
Vesting	3 full-biennial assemblies.	2 full-biennial assemblies.
In-service COLA	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.  If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.	Benefit adjusted each year based on the percentage increase in the current pay for an active member of the general assembly.
Survivor benefit (Death before retirement) Non duty-related death Duty-related death	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.  Survivor benefit to eligible spouse or children no less	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.  Survivor benefit to eligible spouse or children no less
Duty Telated death	than 50% of current pay (no service requirement).	than 50% of current pay (no service requirement).
Optional forms of payment (Death after retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  - Life Income Annuity  - Unreduced Joint & 50% Survivor  - Joint & 100% Survivor  - 60 or 120 Guaranteed Payments	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  - Life Income Annuity  - Joint & 50% Survivor  - Joint & 100% Survivor  - 120 or 180 Guaranteed Payments



#### MSEP and MSEP 2000 (Comparison of Plans for Elected State Officials)

Plan Provision	MSEP	MSEP 2000
Membership eligibility	Elected to state office.	Elected to state office on or after July 1, 2000.
Normal retirement eligibility	Age 65 with 4 years of service, Age 60 with 15 years of service, or "Rule of 80" - minimum age 50.	Age 55 with 4 years of service or "Rule of 80" - minimum age 50.
Early retirement eligibility	Age 55 with 10 years of service.	Not available.
Benefit Life benefit	12 or more years of service 50% of current pay for highest position held. Less than 12 years of service 1.6% x FAP x service.	(Monthly base pay ÷ 24) x service capped at 12 years or 50% of pay.
Temporary benefit	Not available.	Not available.
Vesting	4 years of service.	4 years of service.
In-service COLA	COLA provisions determined by amount of service relative to 12 years and date of employment.	Not available.
COLA	12 or more years of service COLA is equal to the percentage increase in the current pay of an active elected state official in the highest position held.  Less than 12 years of service If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.  If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.	Benefit adjusted each year based on the percentage increase in the current pay for an active elected state official in the highest position held.
Survivor benefit (Death before retirement) Non duty-related death	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.
Duty-related death	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).
Optional forms of payment (Death after retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  - Life Income Annuity  - Unreduced Joint & 50% Survivor  - Joint & 100% Survivor  - 60 or 120 Guaranteed Payments	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:  - Life Income Annuity  - Unreduced Joint & 50% Survivor  - Joint & 100% Survivor  - 120 or 180 Guaranteed Payments



### ALJLAP

Plan Provision	Requirement
Membership eligibility	Administrative law judge or legal advisor in the Division of Workers' Compensation, a member or
iviembersinp englomey	legal counsel of the Labor and Industrial Relations Commission, chairperson of the State Board of Mediation, or an administrative hearing commissioner.
Normal retirement eligibility	Age 62 with 12 years of service, Age 60 with 15 years of service, or
	Age 55 with 20 years of service.
Reduced retirement eligibility	Age 65 with less than 12 years of service with reduced benefit, based upon years of service relative to 12 years.
Benefit formula	12 or more years of service 50% of the average highest 12 consecutive months of salary.
Vesting	Immediate.
In-service COLA	Not available.
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.
	If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.
Survivor benefit (Death before retirement)	Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70.
Survivor benefit (Death after retirement)	Survivor benefit to eligible spouse equal to 50% of the member's annuity at the time of death.



#### Judicial Plan

Plan Provision	Requirement
Membership eligibility	Must be a judge or commissioner of the supreme court or of the court of appeals, or a judge of any circuit court, probate court, magistrate court, court of common pleas, or court of criminal corrections, or a justice of the peace, or a commissioner or deputy commissioner of the circuit court appointed after February 29, 1972.
Normal retirement eligibility	Age 62 with 12 years of service, Age 60 with 15 years of service, or Age 55 with 20 years of service.
Early retirement eligibility	Age 62 with less than 12 years of service or age 60 with less than 15 years of service with a reduced benefit based on years of service relative to 12 or 15 years.
Benefit formula	12 or more years of service 50% of the FAP.  Less than 12 or 15 years of service If between age 60 and 62 (years of service ÷ 15) x 50% of compensation on the highest court served. If age 62 (years of service ÷ 12) x 50% of compensation on the highest court served.
Vesting	Immediate.
In-service COLA	Judges who are at least age 60 and work beyond the date first eligible for unreduced benefits will receive COLAs for each year worked beyond normal retirement eligibility. COLA provisions are determined by date of employment.
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.
	If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.
Survivor benefit (Death before retirement)	Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70.
Survivor benefit (Death after retirement)	Survivor benefit to eligible spouse equal to 50% of the member's annuity at the time of death.

The plans previously described are noncontributory with the entire cost paid by the state of Missouri. The contribution rate paid by the state for the general state employees, uniformed members of the water patrol, legislators, and elected state officials retirement plan for FY02 was 11.59% of the membership payroll. The contribution rate paid by the state for the ALJLAP for FY02 was 22.32% of the membership payroll. The contribution rate paid by the state for the Judicial Plan for FY02 was 55.30% of the membership payroll.



#### Life Insurance Plans

(MOSERS administers basic and optional term life insurance plans for eligible state employees and retirees.)

Active Members*	Requirement	Retired Members	Requirement
Basic Life Insurance An amount equal to one-times annual salary (with a minimum of \$15,000) while actively employed.	Actively employed in an eligible state position resulting in membership in MOSERS.	Basic Life Insurance at Retirement \$5,000 basic life insurance during retirement.	Must retire directly from active employment.
Duty-Related Death Benefit Duty-related death benefit equivalent to two-times the annual salary the member was earning at the time of death in addition to the basic life insurance amount of one-times annual salary.	Actively employed in an eligible state position resulting in membership in MOSERS.	Optional Life Insurance at Retirement (MSEP) An employee may retain up to the lesser of \$60,000 or the amount of optional life insurance coverage held at time of retirement at the group rate and may convert any remaining basic and optional life insurance at individual rates	Must retire directly from active employment.
Optional Life Insurance Additional life insurance may be purchased in multiples of annual salary up to six-times annual salary (maximum of \$800,000) or in a flat amount in multiples of \$1,000 not to exceed the maximum. Spouse coverage may be purchased in multiples of \$1,000 up to a maximum of \$100,000; however, the amount of spouse coverage cannot exceed the amount of optional coverage the member has purchased. Coverage for children is available in a flat amount of \$10,000 per child.	Actively employed in an eligible state position resulting in membership in MOSERS.	at individual rates.	Must retire directly from active employment.

<sup>\*</sup>Terminating employees may convert coverage up to the amount they had as an active employee at individual rates.



#### Long-Term Disability (LTD) Plan

(MOSERS administers the LTD Plan for eligible state employees who become disabled during active employment.)

Plan	Provision
General State Employees, Legislators, and Elected State Officials	Long-Term Disability - Eligible participants receive 60% of their compensation minus primary social security, workers' compensation, and employer provided income. Benefits commence after
Members of MOSERS in a position normally requiring 1,000 hours of work a year are covered under the LTD plan, unless they work for a state agency which has its own LTD plan.	90 days of disability or after sick leave expires, whichever occurs last. LTD benefits cease upon the earliest of (i) when disability ends, (ii) when the member is first eligible for normal retirement benefits or is receiving early retirement benefits, (iii) when the member returns to work, or (iv) upon the member's death.
	Partial Disability - A member may be considered partially disabled during the benefit waiting period and the 24 months following that period if the member is working in an occupation, but as a result of physical disease, injury, pregnancy, or mental disorder, is unable to earn more than 80% of pre-disability earnings. After the first 24 months, a member may be considered partially disabled if working in an occupation but unable to earn more than 60% of the member's pre-disability earnings. In both instances, work earnings are used to reduce the LTD benefit.
Water Patrol	Uniformed members who are eligible for statutory occupational disability receive benefits equal to 50% of compensation with no offset for social security at the time of disability. For nonoccupational disabilities, eligible participants receive the same benefit as general employees.
<u>Judges</u>	In addition to the disability benefits provided to general employees, judges also receive benefits under the state constitution. Participants receive 50% of salary until the current term expires.



### **Changes in Plan Provisions**

On July 11, 2002, Governor Bob Holden signed into law HB 1455 – legislation that involved minor modifications to and clarifications of the Missouri State Employees' Plan, the Missouri State Employees' Plan 2000, the Administrative Law Judges and Legal Advisors' Plan, and the Judicial Plan. These changes were designed to enable MOSERS to more effectively administer these plans as well as ease some of the administrative burden associated with members and their beneficiaries applying for and receiving benefits. There were no benefit increases enacted in FY02.



### **Actuarial Present Values** As of June 30, 2002

#### **MSEP**

	MSEI		
Actuarial Present Value June 30, 2002	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$ 3,589,762,636	\$ 775,172,992	\$ 2,814,589,644
Disability benefits likely to be paid to present active members who become totally and permanently disabled	91,394,069	42,041,347	49,352,722
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	141,937,176	43,981,233	97,955,943
Separation benefits likely to be paid to present active members Active member totals	405,027,885 \$ 4,228,121,766	202,134,549 \$ 1,063,330,121	202,893,336 3,164,791,645
Members on leave of absence & LTD Service retirement benefits based on service rendered before the valuation date Terminated-vested members			85,778,750
Service retirement benefits based on service rendered before the valuation date			327,244,847
Retired lives BackDROP installment payments incurred, but not yet p Total actuarial accrued liability Assets used in valuation Unfunded actuarial accrued liability	aid		2,715,873,070 583,963 6,294,272,275 6,033,133,598 \$ 261,138,677



### **Actuarial Present Values** As of June 30, 2002

### ALJLAP

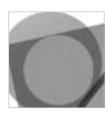
	•		
Actuarial Present Value June 30, 2002	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$ 12,183,178	\$ 4,494,935	\$ 7,688,243
Disability benefits likely to be paid to present active members who become totally and permanently disabled	238,674	152,016	86,658
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	509,336	306,750	202,586
Separation benefits likely to be paid to present active members Active member totals	1,822,161 \$ 14,753,349	1,169,534 \$ 6,123,235	652,627 8,630,114
Terminated-vested members Service retirement benefits based on service rendered before the valuation date			1,276,578
Retired lives Total actuarial accrued liability Assets used in valuation Unfunded actuarial accrued liability			8,268,650 18,175,342 15,172,619 \$ 3,002,723



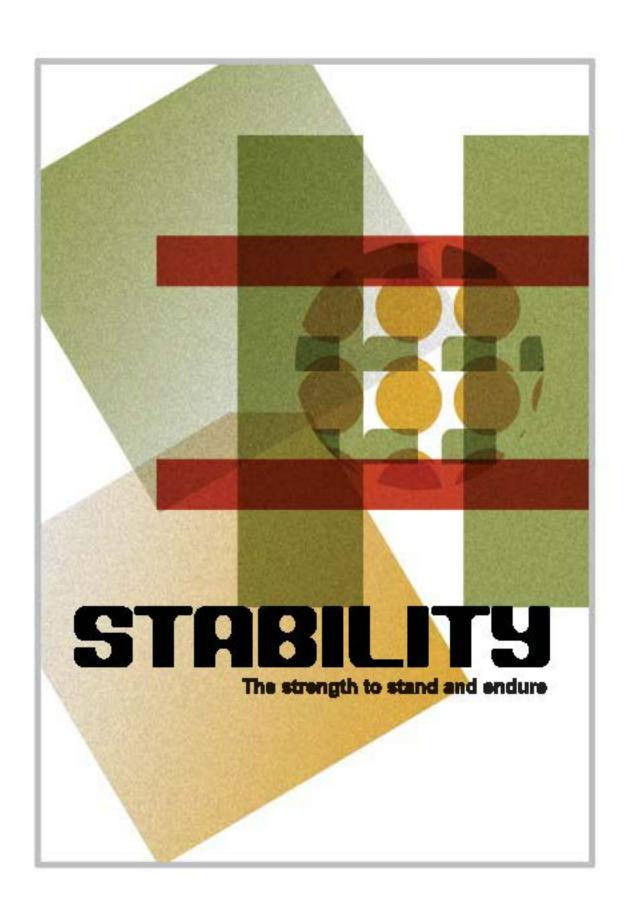
### **Actuarial Present Values** As of June 30, 2002

### Judicial Plan

Actuarial Present Value June 30, 2002	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$ 143,572,889	\$ 50,807,491	\$ 92,765,398
Disability benefits likely to be paid to present active members who become totally and permanently disabled	1,814,417	1,389,701	424,716
Survivor benefits likely to be paid to widows and children of present active members who die before retiring Active Member Totals	5,932,833 \$ 151,320,139	3,388,314 \$ 55,585,506	2,544,519 95,734,633
Terminated-vested members Service retirement benefits based on service rendered before the valuation date			11,244,830
Retired lives Total actuarial accrued liability Assets used in valuation Unfunded actuarial accrued liability			149,135,989 256,115,452 29,651,113 \$ 226,464,339



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### Summary



#### Plan Membership

Membership in the pension trusts administered by MOSERS increased 1,967. Active members increased 197, retired members and their beneficiaries increased 1,268, and terminatedvested members increased by 502. Membership data for the last ten years ended June 30, 2002, can be found on page 110. Page 111 depicts the location of benefit recipients, showing that the majority remain in the state of Missouri after retirement.

#### Net Assets vs. Liabilities

The charts on page 112 graphically represent the funding progress of the pension plans for the ten years ended June 30, 2002. The area

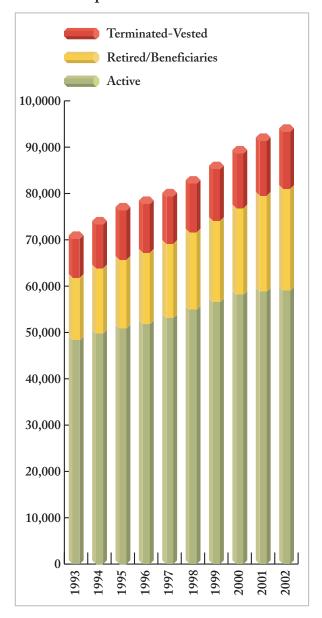
chart on the left of the page shows the portion of the pension liabilities that are unfunded compared to the portion covered by assets in the trust funds. The chart on the right of the page illustrates the funded ratio of the plans for the ten years ended June 30, 2002.

The existence of the unfunded actuarial accrued liabilities is not necessarily an indication of financial problems, but the fluctuations are important and should be monitored and controlled.

The remainder of this section contains various statistical and historical data considered useful in evaluating the condition of the plans.

### Membership in Retirement Plans Last Ten Fiscal Years

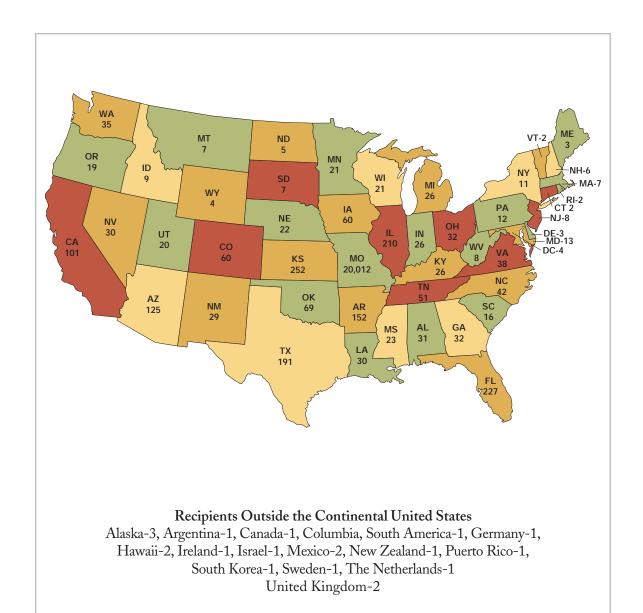
### Membership in Retirement Plans



Fiscal Year	Active	Retired/ Beneficiaries	Terminated- Vested	Totals
1993	48,343	13,441	8,423	70,207
1994	49,826	13,988	9,499	73,313
1995	50,918	14,747	10,673	76,338
1996	51,837	15,362	10,548	77,747
1997	53,147	15,963	10,273	79,383
1998	54,951	16,616	10,561	82,128
1999	56,571	17,495	11,181	85,247
2000	58,201	18,582	11,858	88,641
2001	58,869	20,642	11,837	91,348
2002	59,066	21,910	12,339	93,315



### Distribution of Benefit Recipients by Location June 30, 2002

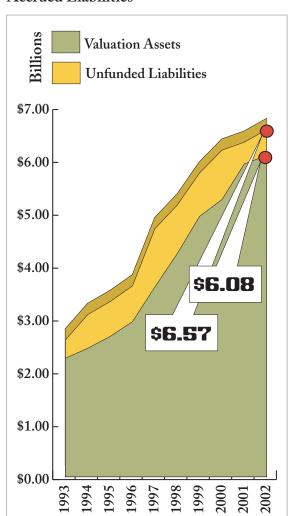




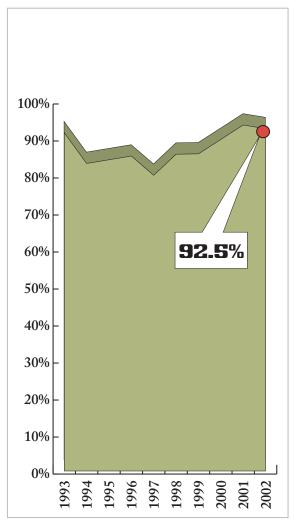
### **Pension Trust Funds**

Ten Years ended June 30, 2002

Actuarial **Accrued Liabilities** 



Valuation Assets as Percents of Pension Liabilities



### Ten-Year Historical Data **Pension Trust Funds**

**MSEP** (Additions by Source)

Fiscal Year	Employer Contribution Rate	Employer Contributions as a Percent of Covered Payroll	Employer Contribution Amount	Employer Contributions Service Transfers	Member Payments for Purchasing Service Credit	Net Investment Income	Other	Total
1993	9.68%	9.69%	\$ 102,988,219	\$ 117,466	\$ 547,961	\$ 293,481,441	\$ 6,047	\$ 397,141,134
1994	9.49	9.48	106,681,308	78,554	765,977	(15,865,184)	411,469	92,072,124
1995	9.04	9.08	108,902,372	170,081	753,984	393,915,517	0	503,741,954
1996	10.69	10.81	137,007,112	135,598	726,527	453,955,454	9,129	591,833,820
1997	10.66	10.77	146,383,371	2,238,691	640,590	653,958,265	235,279	803,456,196
1998	10.40	10.42	152,090,687	36,908	1,035,738	661,480,958	14,925	814,659,216
1999	12.58	12.65	197,909,834	147,315	1,151,328	504,026,290	659,215	703,893,982
2000	11.91	12.02	202,330,547	3,468,697	1,991,206	402,878,683	629,924	611,299,057
2001	11.59	12.27	215,750,128	167,640	1,918,572	(112,164,123)	418,663	106,090,880
2002	11.59	11.82	209,515,026	48,840	3,913,426	(348,106,057)	447,462	(134,181,303)

MSEP (Deductions by Type)

Fiscal Year	Benefits	Contribution Refunds	Service Transfers	Administrative	Legal Settlements	Total
1993	\$ 75,606,809	\$ 22,007	\$ O	\$ 2,441,067	\$ 0	\$ 78,069,883
1994	84,482,785	1,598	16,252	3,336,941	0	87,837,576
1995	96,198,413	0	0	3,060,262	0	99,258,675
1996	115,627,764	0	30,327	3,221,578	23,148,000	142,027,669
1997	126,941,341	102	2,091,233	3,563,018	0	132,595,694
1998	149,261,681	1,514	0	4,500,944	18,998	153,783,137
1999	155,299,924	0	0	5,763,229	0	161,063,153
2000	179,690,822	889	18,609	5,487,531	0	185,197,851
2001	217,862,853	0	31,482	5,749,965	0	223,644,300
2002	268,480,982	0	27,970	5,753,812	0	247,262,764

### Ten-Year Historical Data **Pension Trust Funds**

ALJLAP (Additions by Source)

Fiscal Year	Employer Contribution Rate	Employer Contributions as a Percent of Covered Payroll	Employer Contribution Amount	Net Investment Income	Other	Total
1993	27.77%	28.42%	\$ 548,707	\$ 766,887	\$ 16	\$ 1,315,610
1994	24.18	23.97	502,019	(45,152)	1,056	457,923
1995	22.50	23.00	498,233	986,426	0	1,484,659
1996	21.16	20.26	548,276	1,122,107	23	1,670,406
1997	22.60	22.78	652,709	1,614,183	34	2,266,926
1998	19.66	20.11	564,295	1,613,972	36	2,178,303
1999	18.70	18.32	639,285	1,205,813	1,577	1,846,675
2000	20.10	19.81	807,022	961,336	1,503	1,769,861
2001	22.32	14.03	1,074,946	(273,380)	1,020	802,586
2002	22.32	22.44	1,072,562	(874,249)	1,124	199,437

ALJLAP (Deductions by Type)

Fiscal Year	Benefits	Administrative	Legal Settlements	Total
1993	\$ 502,310	\$ 6,401	\$ O	\$ 508,711
1994	565,082	8,566	0	573,648
1995	600,650	7,663	0	608,313
1996	633,527	7,963	0	641,490
1997	616,859	8,795	0	625,654
1998	677,213	10,981	46	688,240
1999	747,663	13,788	0	761,451
2000	755,574	13,094	0	768,668
2001	776,422	14,015	0	790,437
2002	836,615	14,450	0	851,065



### Ten-Year Historical Data **Pension Trust Funds**

#### Judicial Plan (Additions by Source)

		Employer Contributions				
Fiscal Year	Employer Contribution Rate	as a Percent of Covered Payroll	Employer Contribution Amount	Net Investment Income	Other	Total
1993	Nonfunded	29.01%	\$ 7,728,160	\$ 0	\$ 0	\$ 7,728,160
1993	Nonfunded	30.38	\$,205,509	<b>5</b> 0	Φ O	8,205,509
1995	Nonfunded	32.84	9,188,599	0	0	9,188,599
1996	Nonfunded	33.13	9,907,505	0	0	9,907,505
1997	Nonfunded	33.00	10,450,270	0	0	10,450,270
1998	Nonfunded	35.24	11,433,457	0	0	11,433,457
1999	51.81%	52.29	17,862,353	452,499	592	18,315,444
2000	53.92	53.87	19,988,676	869,566	1,360	20,859,602
2001	55.30	58.09	22,473,913	(391,124)	1,460	22,084,249
2002	55.30	55.13	22,088,485	(1,680,566)	2,160	20,410,079

#### Judicial Plan (Deductions by Type)

Fiscal Year	Benefits	Administrative	Total
1993	\$ 7,728,160	\$ O	\$ 7,728,160
1994	8,205,509	0	8,205,509
1995	9,188,599	0	9,188,599
1996	9,907,505	0	9,907,505
1997	10,450,270	0	10,450,270
1998	11,433,457	0	11,433,457
1999	12,229,325	5,174	12,234,499
2000	13,292,188	11,844	13,304,032
2001	15,010,098	20,051	15,030,149
2002	15,943,642	27,778	15,971,420



# Benefit Expenses by Type Last Ten Fiscal Years

	FY93	FY94	FY95	FY96	FY97
Retirement	\$70,002,701	\$78,018,158	\$ 88,532,996	\$102,257,950	\$112,523,766
Survivor	3,533,845	4,202,875	5,146,981	6,001,028	7,036,816
Disability	484,806	436,022	379,382	347,589	310,693
Lump sum payment	0	0	0	4,494,184	4,258,380
Benefit adjustments	0	0	0	0	0
Judges	7,728,160	8,205,509	9,188,599	9,907,505	10,450,270
Legislators	1,585,456	1,825,730	2,139,053	2,527,014	2,811,686
Administrative law judges	502,310	565,082	600,650	633,527	616,859
Totals	\$83,837,278	\$93,253,376	\$105,987,661	\$126,168,797	\$138,008,470

	FY98	FY99	FY00	FY01	FY02
Retirement	\$126,121,327	\$140,138,342	\$153,916,226	\$196,343,161	\$225,997,699
Survivor	8,233,831	9,812,877	12,551,644	14,845,353	17,070,281
Disability	279,208	245,284	219,550	178,336	145,856
Lump sum payment	3,130,459	1,871,798	1,522,313	1,886,958	1,893,194
Benefit adjustments	8,453,580	39,768	8,162,749	1,134,262	19,626,450
Judges	11,433,457	12,229,325	13,292,188	15,010,098	15,943,642
Legislators	3,043,276	3,191,855	3,318,342	3,474,782	3,747,502
Administrative law judges	677,213	747,663	755,574	776,422	836,615
Totals	\$161,372,351	\$168,276,912	\$193,738,586	\$233,649,372	\$285,261,239



### Benefits Payable June 30, 2002 Tabulated by Option and Type of Benefit

### MSEP (Closed Plan)

Type of Benefit	Number	<b>Annual Funded Benefits</b>	Average Annual Benefit
Service retirement			
Life annuity	4,596	\$ 38,809,530	\$ 8,444
50% joint and survivor	4,803	59,253,031	12,337
75% joint and survivor	8	77,943	9,743
100% joint and survivor	2,103	31,104,619	14,791
5-year certain and life	121	959,448	7,929
10-year certain and life	90	717,577	7,973
Survivor beneficiary	1,438	10,342,759	7,192
Total	13,159	141,264,907	10,735
Disability retirement	33	129,062	3,911
Death-in-service	1,104	7,397,969	6,701
Grand totals	14,296	\$ 148,791,938	10,408

#### MSEP 2000 (New Plan)

Type of Benefit	Number	Annual Funded Benefits	Average Annual Benefits
Service retirement			
Life annuity	5,372	\$ 72,007,723	\$ 13,404
50% joint and survivor	792	18,024,637	22,758
100% joint and survivor	668	12,621,629	18,895
5-year certain and life	59	768,345	13,023
10-year certain and life	195	2,203,864	11,302
15-year certain and life	69	607,843	8,809
Survivor beneficiary	51	567,409	11,126
Total	7,206	106,801,450	14,821
Disability retirement	0 0	0	
Death-in-service	0 0	0	
Grand totals	7,206	\$ 106,801,450	14,821

### ALJLAP

Type of Benefit	Number	Annual Funded Benefits	Average Annual Benefits
0			
Service retirement			
Life annuity	1	\$ 46,584	\$ 46,584
50% joint and survivor	16	664,376	41,524
Survivor beneficiary	8	157,692	19,712
Total	25	\$ 868,652	34,746

#### Judicial Plan

Type of Benefit Numb		Annual Funded Benefits	Average Annual Benefits		
Service retirement					
Life annuity	7	\$ 366,672	\$ 52,382		
50% joint and survivor	252	13,597,244	53,957		
Survivor beneficiary	80	1,575,236	19,690		
Total	339	15,539,152	45,838		
Death-in-service	44	907,846	20,633		
Grand totals	383	\$ 16,446,998	42,943		

#### STATISTICAL SECTION



### **Average Monthly Benefit Amounts** Six Years Ended June 30, 2002

#### **MSEP**

			Years	s Credited	Service by	Category			
Membe	ers Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1997	Average monthly benefit	\$ 121	\$ 275	\$ 303	\$ 556	\$ 822	\$ 1,258	\$ 1,709	\$ 911
	Average final average salary	\$ 1,943	\$ 1,990	\$ 1,627	\$ 1,956	\$ 2,180	\$ 2,590	\$ 2,955	\$ 2,281
	Number of retirees	5	103	159	159	157	200	209	992
1998	Average monthly benefit	\$ 137	\$ 241	\$ 364	\$ 561	\$ 842	\$ 1,271	\$ 1,672	\$ 906
	Average final average salary	\$ 1,919	\$ 1,902	\$ 1,986	\$ 2,003	\$ 2,284	\$ 2,644	\$ 2,917	\$ 2,349
	Number of retirees	9	130	186	181	180	197	256	1,139
1999	Average monthly benefit	\$ 113	\$ 237	\$ 371	\$ 617	\$ 858	\$ 1,236	\$ 1,878	\$ 977
	Average final average salary	\$ 1,599	\$ 2,018	\$ 2,049	\$ 2,276	\$ 2,354	\$ 2,610	\$ 3,275	\$ 2,510
	Number of retirees	5	121	195	193	190	241	268	1,213
2000	Average monthly benefit	\$ 175	\$ 240	\$ 363	\$ 642	\$ 823	\$ 1,354	\$ 1,887	\$ 1,019
	Average final average salary	\$ 2,700	\$ 1,980	\$ 2,011	\$ 2,312	\$ 2,264	\$ 2,886	\$ 3,272	\$ 2,567
	Number of retirees	7	127	202	181	199	258	298	1,272
2001	Average monthly benefit	\$ 222	\$ 251	\$ 431	\$ 671	\$ 957	\$ 1,381	\$ 1,742	\$ 1,067
	Average final average salary	\$ 2,258	\$ 2,051	\$ 2,113	\$ 2,413	\$ 2,498	\$ 2,899	\$ 3,053	\$ 2,614
	Number of retirees	13	389	353	228	276	496	766	2,521
2002	Average monthly benefit	\$ 94	\$ 254	\$ 426	\$ 651	\$ 977	\$ 1,443	\$ 1,859	\$ 956
	Average final average salary	\$ 1,339	\$ 2,207	\$ 2,185	\$ 2,415	\$ 2,567	\$ 3,040	\$ 3,279	\$ 2,629
	Number of retirees	8	258	316	266	279	389	268	1,784
Six yea	rs ended June 30, 2002 Average monthly benefit Average final average salary Number of retirees	\$ 154 \$ 1,999 47	\$ 250 \$ 2,052 1,128	\$ 389 \$ 2,035 1,411	\$ 622 \$ 2,255 1,208	\$ 893 \$ 2,386 1,281	\$ 1,345 \$ 2,826 1,781	\$ 1,784 \$ 3,116 2,065	\$ 988 \$ 2,525 8,921

Note: COLA increases and temporary benefits payable under the MSEP 2000 until age 62 are excluded from the above for comparison purposes.



### **Average Monthly Benefit Amounts** Six Years Ended June 30, 2002

**MSEP** (General Employees)

			Year	s Credited	Service by	Category			
Membe	ers Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1997	Average monthly benefit	\$ 121	\$ 238	\$ 280	\$ 516	\$ 793	\$ 1,249	\$ 1,697	\$ 893
	Average final average salary	\$ 1,943	\$ 1,966	\$ 1,608	\$ 1,909	\$ 2,174	\$ 2,588	\$ 2,956	\$ 2,270
	Number of retirees	5	96	156	156	154	198	207	972
1998	Average monthly benefit	\$ 137	\$ 211	\$ 352	\$ 545	\$ 842	\$ 1,268	\$ 1,668	\$ 901
	Average final average salary	\$ 1,919	\$ 1,868	\$ 1,990	\$ 1,996	\$ 2,284	\$ 2,642	\$ 2,919	\$ 2,348
	Number of retirees	9	124	183	179	180	196	255	1,126
1999	Average monthly benefit	\$ 113	\$ 226	\$ 344	\$ 605	\$ 858	\$ 1,223	\$ 1,871	\$ 967
	Average final average salary	\$ 1,599	\$ 2,005	\$ 2,013	\$ 2,272	\$ 2,354	\$ 2,610	\$ 3,276	\$ 2,504
	Number of retirees	5	118	192	191	190	239	266	1,201
2000	Average monthly benefit	\$ 175	\$ 223	\$ 357	\$ 630	\$ 823	\$ 1,354	\$ 1,881	\$ 1,016
	Average final average salary	\$ 2,700	\$ 1,959	\$ 2,008	\$ 2,298	\$ 2,264	\$ 2,886	\$ 3,272	\$ 2,564
	Number of retirees	7	123	201	179	199	258	296	1,263
2001	Average monthly benefit	\$ 101	\$ 236	\$ 394	\$ 632	\$ 957	\$ 1,375	\$ 1,740	\$ 1,057
	Average final average salary	\$ 1,612	\$ 2,030	\$ 2,052	\$ 2,375	\$ 2,498	\$ 2,900	\$ 3,051	\$ 2,597
	Number of retirees	12	384	347	223	276	493	765	2,500
2002	Average monthly benefit	\$ 94	\$ 252	\$ 416	\$ 640	\$ 977	\$ 1,439	\$ 1,853	\$ 951
	Average final average salary	\$ 1,339	\$ 2,205	\$ 2,182	\$ 2,414	\$ 2,567	\$ 3,041	\$ 3,281	\$ 2,629
	Number of retirees	8	257	313	264	279	388	266	1,775
Six year	rs ended June 30, 2002 Average monthly benefit Average final average salary Number of retirees	\$ 121 \$ 1,825 46	\$ 235 \$ 2,036 1,102	\$ 369 \$ 2,012 1,392	\$ 601 \$ 2,238 1,192	\$ 890 \$ 2,386 1,278	\$ 1,340 \$ 2,826 1,772	\$ 1,779 \$ 3,116 2,055	\$ 980 \$ 2,519 8,837

Note: COLA increases and temporary benefits payable under the MSEP 2000 until age 62 are excluded from the above for comparison purposes.

#### STATISTICAL SECTION



### **Average Monthly Benefit Amounts** Six Years Ended June 30, 2002

**MSEP** (Uniformed Members of the Water Patrol)

			Year	rs Credited	Service by	Category			
Memb	ers Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1997	Average monthly benefit	\$ 0	\$ O	\$ 0	\$ 0	\$ 0	\$ 1,976	\$ 2,168	\$ 2,072
1///	Average final average salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,327	\$ 3,088	\$ 3,208
	Number of retirees	0	0	0	0	0	1	1	2
1998	Average monthly benefit	\$ O	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,782	\$ 0	\$ 1,782
	Average final average salary	\$ 0	\$ O	\$ 0	\$ 0	\$ 0	\$ 3,001	\$ 0	\$ 3,001
	Number of retirees	0	0	0	0	0	1	0	1
1999	Average monthly benefit	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,567	\$ 2,567
	Average final average salary	\$ O	\$ O	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,767	\$ 3,767
	Number of retirees	0	0	0	0	0	0	1	1
2000	Average monthly benefit	\$ O	\$ O	\$ 0	\$ 1,749	\$ 0	\$ 0	\$ 3,297	\$ 2,523
	Average final average salary	\$ O	\$ O	\$ 0	\$ 4,432	\$ 0	\$ 0	\$ 4,014	\$ 4,223
	Number of retirees	0	0	0	1	0	0	1	2
2001	Average monthly benefit	\$ 0	\$ O	\$ 1,664	\$ 0	\$ O	\$ 1,923	\$ 3,236	\$ 2,274
	Average final average salary	\$ O	\$ O	\$ 5,833	\$ 0	\$ 0	\$ 3,172	\$ 4,274	\$ 4,426
	Number of retirees	0	0	1	0	0	1	1	3
2002	Average monthly benefit	\$ O	\$ 0	\$ 0	\$ 0	\$ 0	\$ O	\$ 1,843	\$ 1,843
	Average final average salary	\$ O	\$ O	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,432	\$ 3,432
	Number of retirees	0	0	0	0	0	0	1	1
Six yea	rs ended June 30, 2002								
	Average monthly benefit	\$ O	\$ O	\$ 1,664	\$ 1,749	\$ O	\$ 1,894	\$ 2,622	,
	Average final average salary	\$ O	\$ O	\$ 5,833	\$ 4,432	\$ O	\$ 3,167	\$ 3,715	\$ 3,834
	Number of retirees	0	0	1	1	0	3	5	10

Note: COLA increases and temporary benefits payable under the MSEP 2000 until age 62 are excluded from the above for comparison purposes.





### **Average Monthly Benefit Amounts** Six Years Ended June 30, 2002

**MSEP** (Legislators)

			Year	s Credited	Service by	Category			
Memb	ers Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1997	Average monthly benefit	\$ 0	\$ 789	\$ 1,519	\$ 1,949	\$ 2,336	\$ 2,250	\$ 3,689	\$ 1,584
1///	Average final average salary	\$ 0	\$ 2,320	\$ 2,613	\$ 2,613	\$ 2,486	\$ 2,234	\$ 2,613	\$ 2,448
	Number of retirees	0	7	3	2	3	1	1	17
1998	Average monthly benefit	\$ 0	\$ 868	\$ 1,074	\$ 1,953	\$ 0	\$ 0	\$ 2,700	\$ 1,253
	Average final average salary	\$ 0	\$ 2,613	\$ 1,739	\$ 2,613	\$ 0	\$ 0	\$ 2,298	\$ 2,368
	Number of retirees	0	6	3	2	0	0	1	12
1999	Average monthly benefit	\$ O	\$ 684	\$ 1,101	\$ 1,736	\$ 0	\$ 2,821	\$ 3,150	\$ 1,652
	Average final average salary	\$ 0	\$ 2,549	\$ 2,518	\$ 2,613	\$ 0	\$ 2,613	\$ 2,423	\$ 2,556
	Number of retirees	0	3	2	2	0	2	1	10
2000	Average monthly benefit	\$ O	\$ 759	\$ 1,519	\$ 1,736	\$ 0	\$ O	\$ 2,400	\$ 1,242
	Average final average salary	\$ 0	\$ 2,613	\$ 2,613	\$ 2,613	\$ 0	\$ 0	\$ 2,423	\$ 2,586
	Number of retirees	0	4	1	1	0	0	1	7
2001	Average monthly benefit	\$ O	\$ 925	\$ 1,376	\$ 1,750	\$ 0	\$ 2,649	\$ 0	\$ 1,548
	Average final average salary	\$ 0	\$ 2,613	\$ 2,613	\$ 2,608	\$ 0	\$ 2,604	\$ 0	\$ 2,610
	Number of retirees	0	4	3	4	0	2	0	13
2002	Average monthly benefit	\$ O	\$ 871	\$ 1,451	\$ 2,068	\$ 0	\$ 2,830	\$ 3,365	\$ 1,944
	Average final average salary	\$ 0	\$ 2,613	\$ 2,550	\$ 2,613	\$ 0	\$ 2,613	\$ 2,613	\$ 2,589
	Number of retirees	0	1	3	2	0	1	1	8
Six yea	rs ended June 30, 2002								
	Average monthly benefit	\$ 0	\$ 816	\$ 1,332	\$ 1,858	\$ 2,336	\$ 2,670	\$ 3,061	\$ 1,535
	Average final average salary	\$ 0	\$ 2,523	\$ 2,413	\$ 2,611	\$ 2,486	\$ 2,547	\$ 2,474	\$ 2,512
	Number of retirees	0	25	15	13	3	6	5	67

#### STATISTICAL SECTION



### **Average Monthly Benefit Amounts** Six Years Ended June 30, 2002

**MSEP** (Elected State Officials)

		_			Year	s Cre	dited S	Service by (	Category			
Membe	ers Retiring During Fiscal Year		<5	5-	-10	10	-15	15-20	20-25	25-30	30+	All Members
1997	Average monthly benefit Average final average salary	\$	0	\$	0	\$ \$	0	\$ 4,019 \$ 8,038	\$ 0 \$ 0	\$ O \$ O	\$ 0 \$ 0	\$ 4,019 \$ 8,038
	Number of retirees	Φ	0	Φ	0	Ф	0	1	0	0	0	φ δ,036 1
1998	Average monthly benefit	\$	0	\$	0	\$	0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
	Average final average salary Number of retirees	\$	0	\$	0	\$	0	\$ 0 0	\$ 0 0	\$ 0 0	\$ 0 0	\$ 0 0
1999	Average monthly benefit Average final average salary	\$	0	\$ \$	0		,019 ,038	\$ 0 \$ 0	\$ 0 \$ 0	\$ O \$ O	\$ 0 \$ 0	\$ 4,019 \$ 8,038
	Number of retirees		0		0		1	0	0	0	0	1
2000	Average monthly benefit Average final average salary Number of retirees	\$	0 0 0	\$ \$	0 0 0	\$ \$	0 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0
2001	Average monthly benefit Average final average salary Number of retirees		1,668 0,007 1	,	154 038 1		,882 ,007 2	\$ 5,004 \$10,007 1	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 3,918 \$ 9,613 5
2002	Average monthly benefit Average final average salary Number of retirees	\$	0 0 0	\$ \$	0 0 0	\$	0 0 0	\$ 0 \$ 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0 0	\$ 0 \$ 0
Six year	rs ended June 30, 2002 Average monthly benefit Average final average salary Number of retirees		1,668 0,007 1	,	154 038 1		,594 ,351 3	\$ 4,511 \$ 9,023 2	\$ 0 \$ 0 0	\$ O \$ O O	\$ 0 \$ 0 0	\$ 3,947 \$ 9,163 7





### **Average Monthly Benefit Amounts** Six Years Ended June 30, 2002

ALJLAP

			Year	rs Credited S	Service by	Category			
Membe	ers Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1997	Average monthly benefit	\$ O	\$ O	\$ 0	\$ 0	\$ 2,578	\$ O	\$ O	\$ 2,578
	Average final average salary	\$ O	\$ O	\$ O	\$ 0	\$ 5,156	\$ 0	\$ 0	\$ 5,156
	Number of retirees	0	0	0	0	1	0	0	1
1998	Average monthly benefit	\$ 0	\$ 0	\$ 2,927	\$ 0	\$ 2,875	\$ 0	\$ 0	\$ 2,892
	Average final average salary	\$ 0	\$ 0	\$ 5,854	\$ 0	\$ 5,749	\$ 0	\$ 0	\$ 5,784
	Number of retirees	0	0	1	0	2	0	0	3
1999	Average monthly benefit	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2,,,,	Average final average salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
	Number of retirees	0	0	0	0	0	0	0	0
2000	Average monthly benefit	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
	Average final average salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
	Number of retirees	0	0	0	0	0	0	0	0
2001	Average monthly benefit	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,982	\$ 0	\$ 0	\$ 2,982
	Average final average salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,965	\$ 0	\$ 0	\$ 5,965
	Number of retirees	0	0	0	0	1	0	0	1
2002	Average monthly benefit	\$ 0	\$ 0	\$ 0	\$ O	\$ 3,739	\$ O	\$ 0	\$ 3,739
	Average final average salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 7,478	\$ 0	\$ 0	\$ 7,478
	Number of retirees	0	0	0	0	1	0	0	1
Six year	rs ended June 30, 2002								
•	Average monthly benefit	\$ 0	\$ 0	\$ 2,927	\$ 0	\$ 3,010	\$ 0	\$ O	\$ 2,996
	Average final average salary	\$ O	\$ O	\$ 5,854	\$ O	\$ 6,019	\$ 0	\$ O	\$ 5,992
	Number of retirees	0	0	1	0	5	0	0	6

#### STATISTICAL SECTION



### **Average Monthly Benefit Amounts** Six Years Ended June 30, 2002

#### Judicial Plan

			Year	s Credited	Service by	Category			
Membe	ers Retiring During Fiscal Year	<5	5-10	10-15	15-20	20-25	25-30	30+	All Members
1997	Average monthly benefit Average final average salary Number of retirees	\$ 1,120 \$ 6,719 1	\$ 0 \$ 0	\$ 0 \$ 0	\$ 3,490 \$ 6,979 3	\$ 0 \$ 0 0	\$ 0 \$ 0	\$ 0 \$ 0	\$ 2,898 \$ 6,914 4
1998	Average monthly benefit Average final average salary Number of retirees	\$ 243 \$ 5,824 1	\$ 1,567 \$ 5,129 1	\$ 3,689 \$ 7,378 2	\$ 3,484 \$ 6,969 4	\$ 3,624 \$ 7,247 7	\$ 3,999 \$ 7,999 4	\$ 3,921 \$ 7,843 1	\$ 3,420 \$ 7,208 20
1999	Average monthly benefit Average final average salary Number of retirees	\$ 289 \$ 6,598 2	\$ 2,099 \$ 7,108 3	\$ 3,647 \$ 7,409 7	\$ 3,759 \$ 7,517 8	\$ 3,635 \$ 7,270 1	\$ 4,450 \$ 8,900 1	\$ 4,123 \$ 8,246 1	\$ 3,247 \$ 7,432 23
2000	Average monthly benefit Average final average salary Number of retirees	\$ 0 \$ 0	\$ 1,282 \$ 5,129 1	\$ 3,368 \$ 6,735 4	\$ 4,116 \$ 8,232 4	\$ 3,991 \$ 7,982 4	\$ 4,139 \$ 8,278 3	\$ 4,375 \$ 8,750 1	\$ 3,763 \$ 7,677 17
2001	Average monthly benefit Average final average salary Number of retirees	\$ 0 \$ 0	\$ 1,711 \$ 8,000 1	\$ 4,216 \$ 8,519 5	\$ 3,849 \$ 7,698 3	\$ 4,500 \$ 9,000 6	\$ 4,573 \$ 9,146 4	\$ 4,250 \$ 8,500 2	\$ 4,197 \$ 8,632 21
2002	Average monthly benefit Average final average salary Number of retirees	\$ 0 \$ 0	\$ 1,337 \$ 6,095	\$ 3,606 \$ 7,405 2	\$ 4,093 \$ 8,186 4	\$ 3,905 \$ 7,811 2	\$ 4,576 \$ 9,153 3	\$ 0 \$ 0	\$ 3,872 \$ 8,061 12
Six year	rs ended June 30, 2002 Average monthly benefit Average final average salary Number of retirees	\$ 485 \$ 6,434 4	\$ 1,742 \$ 6,525 7	\$ 3,733 \$ 7,548 20	\$ 3,802 \$ 7,604 26	\$ 3,989 \$ 7,978 20	\$ 4,326 \$ 8,651 15	\$ 4,184 \$ 8,368 5	\$ 3,642 \$ 7,745 97



### **Retirees and Beneficiaries Tabulated by Fiscal Year of Retirement** As of June 30, 2002

**MSEP** 

		WISEI	
Fiscal Year of Retirement	Number	Total Annual Benefits	Average Monthly Benefit
1965 & prior	4	\$ 27,698	\$ 577
1966	2	13,544	564
1967	7	53,721	640
1968	8	34,266	357
1969	12	72,223	502
1970	14	100,618	599
1971	20	112,575	469
1972	26	172,288	552
1973	76	491,935	539
1974	85	496,457	487
1975	112	706,865	526
1976	138	876,367	529
1977	183	1,197,722	545
1978	148	898,324	506
1979	160	1,106,621	576
1980	189	1,321,102	582
1981	233	1,815,117	649
1982	345	2,670,856	645
1983	356	2,960,764	693
1984	371	2,704,269	607
1985	380	3,220,803	706
1986	460	3,391,775	614
1987	523	4,545,611	724
1988	599	6,044,245	841
1989	632	7,093,654	935
1990	641	7,173,167	933
1991	726	9,044,646	1,038
1992	823	9,551,659	967
1993	928	10,517,455	944
1994	930	10,191,422	913
1995	1,175	14,131,336	1,002
1996	1,139	13,888,769	1,016
1997	1,155	15,247,194	1,100
1998	1,332	17,729,868	1,109
1999	1,444	20,069,502	1,158
2000	1,506	23,696,163	1,311
2001	2,798	53,564,474	1,595
2002	2,077	33,424,695	1,341
	21,757	\$ 280,359,770	1,074
		2-2-2-2	



### **Retirees and Beneficiaries**

### **Tabulated by Fiscal Year of Retirement** As of June 30, 2002

### ALJLAP

Fiscal Year of Retirement	Number	Total Annual Benefits	Average Monthl Benefit		
1989 & prior	4	\$ 164,921	\$ 3,436		
1991	2	57,927	2,414		
1992	3	113,127	3,142		
1993	1	41,233	3,436		
1994	1	21,085	1,757		
1995	2	64,904	2,704		
1997	4	106,853	2,226		
1998	3	121,797	3,383		
2000	1	23,186	1,932		
2001	2	58,662	2,444		
2002	1	44,869	3,739		
	24	\$ 818,564	2,842		

#### Judicial Plan

Fiscal Year of Retirement	Number	Total Annual Benefits	Average Monthly Benefit	
1976 & prior	6	\$ 98,109	\$ 1,363	
1977	4	77,448	1,614	
1978	1	11,291	941	
1979	3	99,058	2,752	
1980	7	211,709	2,520	
1981	7	257,347	3,064	
1982	5	200,073	3,335	
1983	10	302,738	2,523	
1984	4	75,458	1,572	
1985	5	215,610	3,594	
1986	9	261,243	2,419	
1987	28	1,070,554	3,186	
1988	12	493,479	3,427	
1989	18	774,684	3,587	
1990	12	462,673	3,213	
1991	28	1,328,384	3,954	
1992	15	697,024	3,872	
1993	16	647,821	3,374	
1994	14	564,251	3,359	
1995	30	1,616,929	4,491	
1996	13	568,751	3,646	
1997	9	309,052	2,862	
1998	27	1,340,261	4,137	
1999	30	1,290,814	3,586	
2000	29	1,299,575	3,734	
2001	23	1,286,487	4,661	
2002	16	698,567	3,638	
	381	\$ 16,259,390	3,556	





### **Total Benefits Payable**

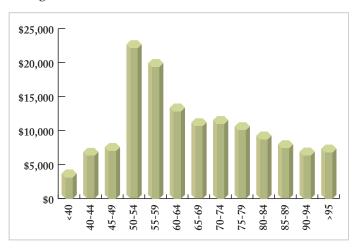
### Tabulated by Attained Ages of Benefit Recipients As of June 30, 2002

#### **MSEP**

		Service etirement		Disability Retirement		vors and ficiaries	Totals		
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	
Under 20					77	\$ 171,866	77	\$ 171,866	
20-24					18	65,129	18	65,129	
25-29					3	11,496	3	11,496	
30-34					17	82,572	17	82,572	
35-39					26	114,444	26	114,444	
40-44					46	291,184	46	291,184	
45-49			2	\$ 5,496	105	747,358	107	752,854	
50-54	782	\$ 20,109,114	10	42,794	178	1,341,797	970	21,493,705	
55-59	2,012	41,460,652	9	31,979	220	1,971,591	2,241	43,464,222	
60-64	3,161	41,827,204	11	47,341	274	2,415,054	3,446	44,289,599	
65-69	3,915	42,956,228	1	1,452	396	3,124,798	4,312	46,082,478	
70-74	3,328	38,448,366			415	2,769,822	3,743	41,218,188	
75-79	2,678	28,332,597			389	2,639,614	3,067	30,972,211	
80-84	1,712	15,668,097			264	1,579,594	1,976	17,247,691	
85-89	847	6,457,325			115	710,401	962	7,167,726	
90-94	363	2,340,447			40	228,406	403	2,568,853	
95	24	165,188			6	35,316	30	200,504	
96	12	90,979			1	2,424	13	93,403	
97	17	102,223			2	4,599	19	106,822	
98	9	77,304			1	672	10	77,976	
99	7	59,556					7	59,556	
100	5	30,504					5	30,504	
101	3	26,265					3	26,265	
102	1	4,140					1	4,140	
Totals	18,876	\$ 238,156,189	33	\$ 129,062	2,593	\$ 18,308,137	21,502	\$ 256,593,388	

Average Age At Retirement 61.2 years Average Age Now 69.7 years

#### Average Annual Benefits





### **Total Benefits Payable**

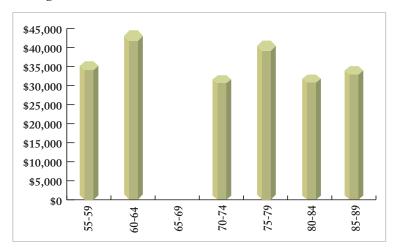
### Tabulated by Attained Ages of Benefit Recipients As of June 30, 2002

#### ALJLAP

	Service Retirement			Disability Retirement		vors and eficiaries	Totals	
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
55	1	\$ 44,868					1	\$ 44,868
56	1	37,224					1	37,224
57		,			1	\$ 20,268	1	20,268
60	1	37,644					1	37,644
64	1	47,016					1	47,016
70	2	82,892					2	82,892
72		,			2	45,168	2	45,168
73	1	21,084					1	21,084
74	1	41,232			1	23,184	2	64,416
75	1	52,656					1	52,656
76	1	45,540			1	5,268	2	50,808
77	1	42,732					1	42,732
78	1	47,400					1	47,400
79	1	43,848					1	43,848
80	1	44,196					1	44,196
82	1	46,584			2	41,088	3	87,672
85	1	29,460			1	22,716	2	52,176
88	1	46,584				·	1	46,584
Totals	17	\$ 710,960	0	\$ 0	8	\$ 157,692	25	\$ 868,652

Average Age At Retirement 66.1 years Average Age Now 74.3 years

#### Average Annual Benefits







## **Total Benefits Payable**

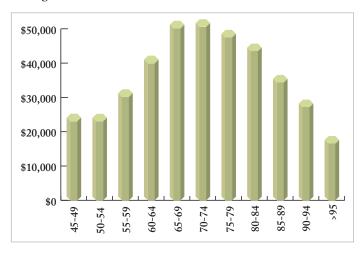
### Tabulated by Attained Ages of Benefit Recipients As of June 30, 2002

#### Judicial Plan

	Service Retirement			Disability Retirement		ivors and eficiaries	Totals	
Attained Age	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
40-44								
45-49					1	\$ 23,100	1	\$ 23,100
50-54					6	138,341	6	138,341
55-59	5	\$ 250,668			14	323,537	19	574,205
60-64	32	1,375,071			5	105,396	37	1,480,467
65-69	34	1,759,441			2	46,956	36	1,806,397
70-74	64	3,727,341			17	374,736	81	4,102,077
75-79	59	3,410,860			26	629,362	85	4,040,222
80-84	35	1,936,316			17	326,988	52	2,263,304
85-89	20	1,042,603			20	332,770	40	1,375,373
90-94	8	388,752			12	155,268	20	544,020
95 and over	2	72,864			4	26,628	6	99,492
Totals	259	\$ 13,963,916	0	\$ O	124	\$ 2,483,082	383	\$ 16,446,998

Average Age At Retirement 65.5 years 75.3 years Average Age Now

#### Average Annual Benefits





### Ten-Year Historical Data **Internal Service Fund**

#### Revenues by Source

Fiscal Year	Employer Contributions*	Member Contributions*	Investment Income*	Optional Life Premium Receipts	Basic Life Premium Receipts	LTD Premium Receipts	HMO Premium Receipts*	Premium Retention for Operating Expenses*	Miscellaneous Income	Settlemer Net of Legal Expense	
1993	\$ 62,080,566	\$ 21,380,567	\$ 693,202	\$ 4,551,873	\$ 2,365,344	\$ 5,003,490	\$ 16,429,142	\$ 365,106	\$ 1,340	\$ 0	\$112,870,630
1994	37,918,127	11,513,810	384,795	4,862,255	2,520,938	5,265,812	8,308,277	355,642	3,534	0	71,133,190
1995	0	0	79,215	5,535,334	2,801,939	5,650,682	0	275,646	0	205,411	14,548,227
1996	0	0	81,687	5,924,096	2,037,618	6,148,535	0	396,889	0	0	14,588,825
1997	0	0	50,608	6,319,662	3,224,533	6,711,653	0	379,683	1	0	16,686,140
1998	0	0	58,889	7,116,370	3,656,443	5,947,386	0	423,378	41	0	17,202,507
1999	0	0	55,323	8,216,777	3,556,088	7,169,727	0	413,519	31,098	0	19,442,532
2000	0	0	68,349	8,688,948	3,712,349	7,718,487	0	436,488	0	0	20,624,621
2001	0	0	81,717	9,277,192	5,357,260	8,551,077	0	464,351	0	0	23,731,597
2002	0	0	47,767	9,908,883	6,638,030	8,206,795	0	436,489	0	0	25,237,964

 $<sup>^{</sup>st}$  The Missouri State Employees' Medical Care Plan operations were transferred to the Missouri Consolidated Health Care Plan January 1, 1994.



### Ten-Year Historical Data **Internal Service Fund**

### Expenses by Type

Fiscal Year	Medical Claims*	Administrative*	Optional Life Premium Disbursements	Basic Life Premium Disbursements	LTD Premium Disbursements	HMO Premium Disbursements	Premium Refunds*	Basic Life Death Benefits	Total
1993	\$83,281,386	\$6,055,713	\$4,514,821	\$2,365,344	\$5,002,115	\$16,386,136	\$267,792	\$ 0	\$117,873,307
1994	23,005,156	3,336,388	4,825,723	2,519,343	5,264,677	8,284,843	152,961	0	47,389,091
1995	0	349,835	5,482,421	2,799,469	5,648,930	0	57,161	5,000	14,342,816
1996	0	330,702	5,874,317	3,023,323	6,146,610	0	53,652	0	15,428,604
1997	0	363,276	6,269,758	3,222,327	6,708,212	0	55,550	0	16,619,123
1998	0	470,791	7,053,924	3,654,416	5,945,374	0	66,485	0	17,190,990
1999	0	622,545	8,154,983	3,555,101	7,167,330	0	65,177	5,000	19,570,136
2000	0	519,271	8,622,170	3,711,311	7,716,026	0	70,277	0	20,639,055
2001	0	410,906	8,577,987	5,355,775	8,546,942	0	704,825	0	23,596,435
2002	0	439,232	9,836,571	6,635,835	8,203,114	0	78,188	0	25,192,940

<sup>\*</sup> The Missouri State Employees' Medical Care Plan operations were transferred to the Missouri Consolidated Health Care Plan January 1, 1994.



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